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ABSTRACT

A project developed a model curriculum to be delivered by computer-based instruction to teach the required literacy skills for entry workers in the health insurance industry. Literacy task analyses were performed for the targeted jobs and then validated with focus groups. The job tasks and related basic skills were divided into modules. The job tasks were presented in job-related scenarios that engaged the learners in tasks they must solve. Five modules were developed: orientation to computer software, medical terminology, reading claims forms, clear writing, and using reference materials. Job-related screening and criterion-referenced assessments, student attitude survey, instructor's manual, and evaluation instruments were also developed. The curriculum materials were implemented at Pennsylvania Blue Shield; more than 200 students received instruction. (Appendixes include advisory council meeting minutes and publicity materials. An evaluation of the program by an outside evaluator is attached. These findings of the formative and summative evaluation are reported: 268 students participated in classes on a volunteer basis; students at all reading levels showed significant gains; students' attitudes showed very little change; students expressed a high degree of satisfaction with the course; and supervisors fully supported workers' participation. Appendixes to the evaluation include instruments and tabular information.) (YLB)

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ED 397 217

Pennsylvania Blue Shield's Job Linked Skills Program

A Basic Skills Education Program Made Possible By A Grant From:

The U.S. Department of Education
Office of Vocational and Adult Education (OVAE)
Division of National Programs (DNP)

Final Performance Report

January 1994

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Emory J. Brown

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ACKNOWLEDGEMENTS

The Job Linked Skills Program (JLSP) would not have been possible without the vision and support of this endeavor by Pennsylvania Blue Shield's senior management, specifically our President and CEO, Sam Ross, and Senior Vice President of Administration, Tom Sommers. Their enthusiastic support both morally and financially, have been instrumental in the successes realized. I also thank all management staff, supervisors, secretaries, technical assistants, instructors, programmers, tutors and students for their loyal support of this endeavor. The Advisory Council provided insight feedback, and suggestions on the best approach to our marketing activities and curriculum development. I thank my immediate supervisor, Dave Rippey, for allowing me to "do it my way" and supporting my efforts. To Angela Steck, Gerry Rickards, Marge Janos, Steve Noss, Sandy Hack, Karen Drayton, Mark Dively, Pam Wiedeman, Roger Koontz, Ken Gebhard, Jerry Schreiner, Pat Hykes-Malarz, Rene Salinger, Brenda Bailey, Emily Lint, and Karen Bowser thanks for smiling and humoring me, even when it got a little crazy.

This has been a gratifying experience. I plan to do this again and welcome the opportunity to work with each of you. It has been worth it all!

Thank you U.S. Department of Education for the vision and understanding that human growth comes first from knowledge. We hope that such worthwhile programs can continue.

Donna M. Cheatham
Pennsylvania Blue Shield
Continuing Education Director

Job Linked Skills Program

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Job Linked Skills Program

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Pennsylvania Blue Shield:
Job Linked Skills Program

ORIGINAL PROPOSAL

Pennsylvania Blue Shield recognizes the importance of a well-trained workforce, essential in providing quality services to nearly half of Pennsylvania's residents in its Private Business section; in addition, it is also one of the nation's largest processors of Medicare claims, serving the needs of 3.3 million beneficiaries in Pennsylvania, New Jersey, Delaware, and the District of Columbia. While Pennsylvania Blue Shield operates in several buildings in the Harrisburg area and Williamsport, this program will be located at 1800 Center Street, Camp Hill, PA, which has the greatest need. Pennsylvania Blue Shield is the fourth largest employer in the Harrisburg area, having a total of about 5,000 employees at this Camp Hill location, many of whom commute to work from the center city.

As the manufacturing and heavy industries decline in the numbers of employees needed for the workforce, jobs in service industries, such as health insurance, are growing as reported in America and the New Economy (Carnevale, 1991). Projections for the year 2000 predict a 32% increase in the number of service sector workers (Department of Labor, 1990). These national statistics are supported by local employment predictions in the Harrisburg, Pennsylvania area.

Reports, such as Workforce 2000 (Johnston & Packer, 1987), predict a workforce educational crisis based on well-documented literacy problems in the workplace. Current workers are often faced with a drastically changing workplace: technological advances, for example, are increasing the need for higher order thinking and problem-solving skills. At the same time, however, research (Kirsch & Jungeblut, 1986; Venezky, Kaestle, and Sum, 1987) concludes that the majority of young American adults lack the basic skills they need for successful employment. An increasing number of these young adults lack the basic skills they need for successful employment. An increasing number of these young adults are comprised of women, minorities, and immigrants, groups that typically have not fared well in our educational system. The workforce educational crisis (which has, in fact, begun) is having a clear impact on business. Pennsylvania Blue Shield recognizes that its business cannot continue to expand and prosper without an educated and prepared workforce.

In fact, A State Prepared: Developing Pennsylvania's Work Force (Workforce Development Committee, 1991) reports a dramatic increase in the minority population which is projected to continue, especially in the Capitol region which includes Harrisburg. While the Commonwealth as a whole is remaining relatively stable in population between 1980 and 2000, the Capitol region is predicted to increase by 17.2% by the end of the decade. Over 11% of this gain is due to in-migration to the region.

Koppel (1990), having surveyed a representative cross-section of 2,300 Pennsylvania businesses to assess employers' perceptions of workers' skills,
abilities, and work-related attitudes, concludes that respondents report profound basic workplace deficiencies in entry-level workers' skills, abilities, and attitudes. Employers reveal that their ability to introduce emerging technologies, or even to expand existing processes, is often limited by the lack of workers with needed skills. About one-half of the employers expressed dissatisfaction with workers' communication, writing, and math skills; reading skills were cited as problematic by about one-third of the employers; two-thirds were dissatisfied with entry-level workers' ability to reason and/or problem solve. Only 57% of those who recently applied for work had the basic skills and abilities sought by their companies.

On average, Pennsylvania's population is growing older, being second only to Florida in the population of older people (Work Force Development Committee, 1991). With the general aging population comes growth for the health insurance industry; an older population requires more medical services. Pennsylvania Blue Shield has been rapidly expanding in the past decade; from 1985 to 1990 the number of annual claims doubled. While growth occurred for both clients who used the services of private doctors and those eligible for Medicare, the biggest increases were in the governmental claims. This trend in both Private Business and Medicare (governmental) sections of Pennsylvania Blue Shield is predicted to continue.

Pennsylvania Blue Shield has recognized the need to expand its workforce with competent and trained individuals. It has a relationship with the local Private Industry Council (PIC) to hire new employees from the job training (JTPA) and welfare-to-work programs; these workers serve primarily in entry-level positions that may become more complex as computer technology is revolutionizing the way business is done. Many people of Hispanic and Asian/Pacific origin are moving into the Harrisburg area which is already heavily populated by minorities; as the state capitol becomes more cosmopolitan, so Pennsylvania Blue Shield's workforce is becoming more diverse. Racial demographics of non-exempt or hourly (non-salaried) workers are shown in the following table:

Non-Exempt Employee Count by Race Code
As of 7/8/91

Desc.	Caucasian	Hispanic	Black	Asian/ Pacific Isl	Nat Alask/ Am Indian
Clms Prep-Med NJ	35	0	32	6	2
Clms Prep-Med PA	141	0	32	14	5
Clms Prep-PB	124	3	29	26	4
Other	3471	26	697	61	64
TOTAL	3771	29	790	107	75

(New Jersey Medicare claims are processed at Pennsylvania Blue Shield in Camp Hill, PA)

Non-exempt or hourly (non-salaried) workers are, on average, 33 years old; the workforce is predominantly female in the claims preparation area. Average length of service is three years. One sees in this claim processing environment a huge room of cubicles, each with one person at a computer terminal. This area is the most central to the production process and employs the majority (4,154) of the workers in the facility.

While the targeted positions, described in the Appendix, might be naively called data entry as part of claims preparation and processing, the positions are much more complex because the employee is expected to make split-second decisions about the deposition of a claim after a quick reading of a letter (often handwritten) from a client. The clerk has to decide what the letter is requesting and how that request should be routed through the system. Since the clerk processes, on the average, 354 claims per day (average of 60 claims per hour, 5.9 productive hours per day), these decisions have to be made very rapidly to keep production standards up to high performance. Errors in judgment are costly as the request has to be redirected through the massive system.

Claims, whether for Private Business or Medicare, go through an elaborate system from the time that they are opened in the mailroom where they are sorted by type of claim, assigned a control number, and microfilmed; then they are batched and activated in the system. The claim must be coded and the claim data validated; sometimes information (data) is missing or must be corrected.

Enrollment and eligibility must be determined as well as the history of the subscriber checked for similar services; payment may have to be modified based on a variety of contingencies (e.g., multiple surgeries, second opinions). Once the claim is finalized, an explanation of benefits must be sent to the subscriber and participating provider with payment if applicable. Accuracy and speed are essential for high productivity. Governmental regulations for Medicare claims require elaborate procedures and strict accountability; occasionally, claim information is even subpoenaed in court so records must be systematically stored over time.

The proposed service delivery partnership, which complements the ongoing relationship with the PIC and builds on a workplace literacy program already piloted at Pennsylvania Blue Shield, includes industry, higher education, and a community-based literacy organization. Since Pennsylvania Blue Shield does not have a union, workers will be represented on an Advisory Council which will be established to include management, trainers, targeted employees and current students, and educational partners. The job-specific basic skills course that will result from this partnership will serve as a replicable model for the nation's health insurance industries and specifically for Blue Shield companies throughout the country. The partnership provides a model for workplace literacy service delivery in that:

1. the employer, in partnership with a local community-based literacy provider, initiated the development of a basic skills program in response to changing demands of the workplace;

2. the basic skills program will be industry specific to develop the requisite literacy skills necessary to meet the expanding demands of the workplace;

3. the basic skills program is viewed as part of the overall training scheme of the industry and offered on company time;

4. improvement in job-specific basic skills is assumed to affect productivity positively and upgrade workers' abilities to do their jobs and become upwardly mobile within the company;

5. improvement in job-specific basic skills is also assumed to enhance workers' overall attitudes toward education and abilities to cope with literacy tasks not only on the job but also in other aspects of life.

The partnership of Pennsylvania Blue Shield, Penn State University's Institute for the Study of Adult Literacy (ISAL), and the Tri-County Opportunities Industrialization Center (OIC) is submitting a grant proposal to the U.S. Department of Education for funds under the national Workplace Literacy initiative. All partners and the employees represented on the Advisory Council will have an active role in accomplishing the project's goals and will participate in the evaluation effort (see attached partnership agreement and letters of commitment and narrative section Plan of Operation for partners' roles and responsibilities).

Current and future Pennsylvania Blue Shield employees will be the recipients of services. The partnership proposes to produce a comprehensive, industry-centered model basic skills program to provide entry-level Pennsylvania Blue Shield workers and trainees with the basic skills necessary to succeed in the workplace. Because the project will focus on the basic skills needed in claims preparation and processing, the curriculum and materials produced will be useful to ther health insurance industries across the United States. The model curriculum and materials will be especially useful to the network of Blue Cross and Blue Shield companies, called plans, which are actually 73 locally governed, autonomous corporations each operating under state law. All must belong to the Blue Cross/Blue Shield Association which has additional requirements for the plans, including provision of cost-effective services.

The skills targeted in the course will also provide the basis for employees' upward mobility in the workforce. Pennsylvania Blue Shield supervisors report a growing need for employees who are adaptable, especially relating to the use of technology, and adept at problem-solving. The proposed training will address these needs and provide the training support needed to further the employment possibilities for the company's entry-level workers.

The course, integrating basic skills development with content specific to the health insurance industry, will include computer-based instructional materials, assessment instruments, and an instructor's guide. Counseling and individualized training plans will be included for each program participant. A counselor will work with the Employee Relations Department to help employees access further education and training available onsite in the company and in the community. Since the program will be offered on work time, support services, such as child care and transportation will not be necessary.

The proposed course will be developed and pilot tested in the Harrisburg area, serving approximately 200 adults (both first and second shift) with training offered by the OIC, a local literacy service provider. The curriculum and materials will be disseminated at cost at the end of the project. At the conclusion of the project, the partnership proposes to make the comprehensive, industry-centered model basic skills program available to all Blue Cross and Blue Shield training facilities as well as to other health insurance industries at cost.

NEED FOR THE PROJECT

Pennsylvania Blue Shield's Workforce Needs

Pennsylvania Blue Shield attempts to stay in the forefront of initiatives in human resource development. It currently offers a range of programs designed to help employees do their current jobs better and to compete for positions involving additional skills and responsibilities. Pennsylvania Blue Shield offers coursework onsite-, off work hours with tuition reimbursed, to employees who want associate and bachelor's degrees. Reported educational levels of non-exempt workers are shown in the following table:

Counts of Educational Background for
Pennsylvania Blue Shield - Non-Exempt Employees
As of 7/12/91

Group	No High School Degree	High School Degree	Post High School Degree
Med Clms Prep NJ	1	63	11
Med Clms Prep PA	24	154	14
Other Depts	94	3043	1182
PB Clms Prep	17	157	12
TOTAL	136	3417	1219

(New Jersey Medicare claims are processed at Pennsylvania Blue Shield in Camp Hill, PA)

Pennsylvania Blue Shield recognizes that high school graduation does not always guarantee the level of basic skills mastery necessary in the claims preparation area. Therefore, it examined the levels of absenteeism among hourly workers in the claims preparation area. The Private Business section, which has a slightly greater proportion of high school graduates, also has substantially less absenteeism and lost time; these data are shown in the following table:

Average Sick/Lost Time for Non-Exempt Employees

Department	Average Hours
Private Business Claims Preparation	32.80
Medicare Claims Preparation (PA)	51.45
Medicare Claims Preparation (NJ*)	67.30
Total Company	43.96

(New Jersey Medicare claims are processed at Pennsylvania Blue Shield in Camp Hill, PA)

One program initiated by the company this past spring, in partnership with the OIC, was a pilot workplace literacy program offered onsite on company time for 30 hours of instruction. The usual adult basic education curriculum was modified to include some job-related skills and materials. The results of the pre- and post-testing with the Test of Adult Basic Education (TABE) indicated a positive movement in acquiring literacy skills. While the pilot program was designed to serve only a small number in one class (8), the workers' response was enthusiastic, encouraging the company to apply for federal funds to develop a model curriculum which is job-related and to offer a program that can be expanded to serve many entry-level employees at Pennsylvania Blue Shield.

Meeting the Need/Benefits to Adult Workers and Pennsylvania Blue Shield

Pennsylvania Blue Shield's partnership among management, trainers, workers, higher education, and a community-based literacy provider will provide needed work-related literacy training to educationally disadvantaged trainees and hourly workers. The training will provide these workers with the skills they need to succeed in their current jobs as well as prepare them to adapt to a changing work environment and to advance to more responsible positions with the company.

In an attempt to determine the impact that illiteracy might be having on productivity and quality of services, OIC administered the locator and survey forms of the TABE to a sample of 239 workers in various jobs on first and second shifts in both Private Business and Medicare sections who volunteered to be tested on company time. (Those sampled were from positions such as mail sorters, claims screening, microfilm services, micro processing, reader/printer, claims preparation, administrative support, and inquiry control.) The data were collected and analyzed by OIC to ensure confidentiality; the actual test forms were sent to ISAL for interpretation so that Pennsylvania Blue Shield management and trainers received only a summary of results. Of the 239 tested, six were considered unscorable perhaps being due to not being able to understand the test directions. Of the remaining 233, the average grade equivalent on the reading test was 8.9 or the 69th percentile. Of the 233, 98 were then set aside from further consideration because they seemed to have adequate literacy skills. Of the remaining 135, the average grade equivalent was 6.5 or the 45th percentile.

Since grade equivalents are really not accurate in speaking about adults, it is perhaps more meaningful to report the numbers of employees in the sample appropriately tested within each level or range of the TABE: 27 at Level E (grade equivalents 2.6-4.9); 23 at Level M (grade equivalents 4.6-6.9); 57 at Level D (grade equivalents 6.6-8.9); 28 at Level A (grade equivalents 8.6-12.9). While Pennsylvania Blue Shield has not determined the reading level deemed essential for effective performance in entry-level positions, the number of employees functioning at a marginally literate level was surprising, especially considering that those tested were volunteers (who typically feel more confident of their skills and thus volunteer for basic skills testing).

Since most employees must use a networked computer system for their work, the company decided that the job-related basic skills training should be computer-based. Furthermore, the company is making a commitment to its workers by scheduling the job-related basic skills training during work time to ensure the greatest participation, equal opportunity and access to the training program.

QUALITY OF TRAINING

The proposed project will focus on the non-exempt (hourly), entry-level jobs in the claims processing area at Pennsylvania Blue Shield. The goal is to provide computer-based instruction in job-related literacy skills required for the Grade 5 position in claims preparation (see Appendix for position descriptions). By providing this instruction to those in need at lower level positions, Pennsylvania Blue Shield will enable those workers to progress upward in the company. An employee who has not mastered the basic skills required for the Grade 5 position will be blocked from any further upward mobility within the company. With the prerequisite basic and technical skills, an employee in a Grade 5 position may progress to higher grades even without a bachelor's degree. Therefore, the project will focus on teaching the job-related literacy skills for the Grade 5 position since the company's intention is to promote from within.

As the Pelavin report (1991) evaluating the previously funded workplace literacy projects points out, detailed literacy task analysis of each job is time-consuming, and hence may not be cost-effective. The entry-level jobs at Pennsylvania Blue Shield do share some commonalities in required job tasks: For example, all jobs require (or will require) computer usage, reading technical manuals and job sheets, data entry, rapid problem-solving and decision-making, and reading other materials such as the employee handbook and company newsletter. The project will determine the literacy skills required in common for all these jobs by literacy task analysis procedures targeted at a mid-level of specificity and develop computer-based instruction that teaches the job-related basic skills that cut across all jobs using the content from the workplace.

Since these basic skills are essential to successful employment within any health insurance company, the instructional materials will be useful to many insurance companies in the United States in addition to the extensive network of Blue Cross and Blue Shield plans servicing private business as well as government through the administration of the Medicare program. Since Pennsylvania Blue Shield's intention is to promote from within, many of these entry level workers eventually will be needed in more responsible positions, including salaried positions.

The current project involves developing curriculum materials appropriate to adult learners. Learners, in fact, will play an active role in developing the curriculum. Instructional materials will be work-related and have an immediate impact on the workers enrolled in the program as they are based on job-related content and the relevant training materials. Participation in this program will provide the trainee and entry-level workers with basic skills instruction that will help prepare them for the changing skills and knowledge required for health insurance jobs and for advancement in the company.

Instructors in the pilot site will work with the employees to determine individual educational needs. Student-instructor conferences regarding the instruction will occur regularly and will be encouraged by the project partners. Workers will be encouraged to enter and attend adult basic education or GED programs on their own time in the community, if appropriate. Employees will work at their own pace through the curriculum. Computer-based modules will keep track of student performance, provide immediate feedback, and provide additional practice exercises when necessary.

Adult learners react most positively to self-paced programs with ongoing and immediate feedback on their performance (Darkenwald and Merriam, 1982). The computer provides that in a face-saving, non-threatening approach to instruction, especially in the workplace where computer usage is or will be required of all workers. Research (Askov, Maclay, & Bixler, 1991; Alessi et al., 1982-83; Office of Technology Assessment, 1988; Turniver, 1988; Vacc, 1984) has demonstrated that marginally literate adults can not only use computers effectively for instruction but also make rapid progress in learning basic skills. Computer usage also enhances self-esteem and contributes to a more positive attitude toward learning (Askov & Brown, 1988).

Instruction will be held onsite in a Pennsylvania Blue Shield training room, or possibly in a specially designated facility onsite, appropriately equipped stocked with computer equipment. Access to these facilities will enhance the image of Pennsylvania Blue Shield's special training program for basic skills and make it more appealing to the workers to enroll in the program.

Research on adult learning (Darkenwald and Merriam, 1982; Knowles, 1980; Sticht, 1987) indicates that adults participate in educational programs primarily to improve or advance in their current jobs or to improve their chances of finding better employment. Adults prefer problem- or performance-centered instruction rather that general instruction. In other words, adults prefer reading and writing instruction which uses job-related reports rather than a general adult basic education textbook. (The Pelavin report, 1991, also states that use of job-related materials is one of the four success factors.) This approach to instruction, called functional context education (Sticht, 1987), also results in better transfer of the literacy skills to job tasks because the literacy skills have been taught using job-related materials. Not only do workers find the instructional approach more motivating, because they are improving their literacy skills using materials from their jobs, but also the company (and ultimately the employees) should benefit from increased productivity resulting from the improved ability to perform literacy tasks related to their jobs.

Pennsylvania Blue Shield's specialized training program, under this proposed project, will be delivered by the Tri-County OIC working closely with the Institute for the Study of Adult Literacy (ISAL) at Penn State which will be primarily responsible for curriculum and materials development. OIC and ISAL have collaborated in the past; OIC has been one of the literacy provider organizations in both project of the R.O.A.D. to Success and hence is used to the procedures and expectations in collaborating in research and development projects.

PLAN OF OPERATION

Goal and Objectives

The goal of the project is to develop and deliver by computer-based instruction a job-related basic skills program that uses the context of the Pennsylvania Blue Shield claims processing as the content for basic skills instruction. The objectives for developing and implementing the job-related basic skills program are listed below with some explanation for each. Details of implementation of the objectives are provided under Use of Resources and Personnel.

1. **To develop a model curriculum to be delivered by computer-based instruction to teach the required literacy skills for the health insurance industry.** The lessons will involve job-related basic skills using workplace vocabulary and situations. Pennsylvania Blue Shield has identified the range of positions involving claims processing as needing significant support. Staff will conduct a task analysis of the workplace to ensure the development of training that is congruent with both employee and company needs. The curriculum will focus on development of reading vocabulary and comprehension skills, writing activities, basic math skills, and higher order skills, including problem-solving and decision-making, that cut across the jobs held by hourly workers, but especially targeted at the Grade 5 position. The curriculum design includes:

    1.a. **job-related computer-assisted instruction for basic skills instruction.** Specially designed computer-assisted instruction modules will be developed using the content of the job and training materials for the health insurance industry. Computer-assisted instruction provides independent learning opportunities and promotes computer literacy for workers who do not yet use computers in their jobs. Computers can also be used by pairs of students to promote communication and problem-solving as well as teamwork. The modules will contain quizzes to enable the teacher and worker to monitor progress. See the Appendix for a description of the proposed courseware.

    1.b. **supplementary commercial software programs that can be customized to the workplace.** ISAL has already reviewed existing instructional materials, including computer software, to determine their applicability in job-specific basic skills development (Askov & Clark, 1991). Before developing the proposed new curriculum materials, however, newly published instructional materials will be reviewed for possible inclusion in the program.

2. **To develop screening and assessment instruments.** Screening procedures will be conducted by the teachers to ensure that the program is appropriate for volunteer participants. Short criterion-referenced assessments of job-related basic skills in the functional context of workplace materials will be developed. These assessments will be used for diagnosis and placements in the curriculum, as well as in the evaluation of mastery of the job-related basic skills. The program will use a standardized test before and after participation as part of project evaluation (summative).

3. **To develop an instructor's manual to accompany the curriculum.** An instructor's manual will be used for guidance in instructing the participating adults in job-related basic skills development. The manual will be written simply and concisely and will contain basic program information, guidance in how to develop job-related basic skills in adults, suggestions in devising supplementary print-based study material if necessary, and directions for using the computer-assisted instructional modules.

4. **To offer instructor training workshops.** Three-day workshops will be offered with the purpose of familiarizing instructors from OIC with the Pennsylvania Blue Shield training procedures, curriculum, computer-assisted instructional modules, and the instructor's manual.

5. **To implement the curriculum materials at Pennsylvania Blue Shield.** The job-related basic skills course will be considered part of the regular training program for current workers and new trainees. Participation, while encouraged by management, will be voluntary. Recruitment efforts of other workplace literacy projects will be studied to determine the most successful approaches; OIC will share its expertise in this aspect also. The needs assessment data, presented above, will guide the recruitment efforts.

6. **To acquaint supervisors with the specialized training program.** Supervisors need to understand the benefits of releasing employees from work to participate in this training program. OIC and ISAL will meet with appropriate supervisors to explain the program and elicit their suggestions on implementation.

7. **To evaluate the course in both formative and summative phases.** Formative evaluation information will be collected on the procedures and materials used during initial pilot testing. The partners, teachers, supervisors, trainers, and learners will all be part of the formative evaluation as they suggest changes that will improve the development and implementation of the program. This formative information will be used to make revisions and modifications in the products. Summative evaluation efforts to determine mastery of basic skills include a variety

of qualitative and quantitative measures as described in the evaluation plan. The ultimate evaluation of the job-specific basic skills course will be the ability to targeted Pennsylvania Blue Shield workers to persist and succeed in their current jobs and to advance in the corporation; this long-term relationship will be tracked by Pennsylvania Blue Shield. All members of the partnership will be involved in the evaluation process on an ongoing basis.

8. **To disseminate the findings and information on obtaining the course, including the computer-assisted instruction modules, and the accompanying manuals.** Project information will be distributed to relevant state departments including education, commerce, and labor. Presentations will be made at state and national conferences on adult education and business. A final report will be prepared to summarize the process, materials, and findings. Curriculum materials will be available, at cost, from the Institute for the Study of Adult Literacy. Curriculum materials may also be available from the Blue Cross/Blue Shield Association which distributes other educational and informational materials nationally. Because the skills taught are common to health insurance companies, it is anticipated that many other companies may also want to use the instructional materials to upgrade their workforces.

Management Plan

Each partner brings to the project expertise and skills necessary for the success of the project. Partner responsibilities are delineated below. Specific use of personnel and resources is detailed in the staffing and timeline charts.

Roles of the Partners

Pennsylvania Blue Shield will:

* serve as fiscal agent
* prepare reports to the funding agency
* facilitate internal communication among project partners and the Advisory Council
* identify instructional site
* oversee scheduling and recruitment
* describe occupations for which basic skills training will be developed

- provide Pennsylvnaia Blue Shield training materials to ISAL
- organize employee focus groups on work time
- donate trainers' time to provide feedback on the technical accuracy of the instructional materials
- assist in training service providers to work in the Pennsylvania Blue Shield environment
- pay salaries of workers who attend classes

The Institute (ISAL) will:

- provide expertise in technology-based instruction/training
- conduct literacy task analyses
- develop the job-related curriculum for basic skills instruction
- develop computer software and customize commercial materials
- develop an instructor's manual
- train instructors to use the job-related curriculum
- provide technical assistance in use of job-specific curriculum
- explain the program to Pennsylvania Blue Shield supervisors
- assist in project evaluation
- assist with dissemination efforts
- document the progress of curriculum development and implementation through progress reports to Pennsylvania Blue Shield
- coordinate project evaluation
- contract with external evaluator (see below)

A third-party evaluator will be contracted to:

- conduct a series of evaluations on the project, including:
  - evaluation of participant pre- and post-test data
  - examination of worker and supervisor attitudes
  - post-program performance evaluations
  - cost-benefit analysis
  - employee retention, promotion, and attendance records
  - interview data from partners, local union, learners, supervisors, providers, Advisory Council representatives, and others

Tri-County OIC will:

- deliver instruction using the specially designed curriculum
- assist in instructor training workshops
- assist in explaining the program to Pennsylvania Blue Shield supervisors
- assist in project evaluation
- assist with dissemination efforts

Relations of Project to Purpose of Grants Program

The ability to tie basic skills instruction to workplace needs is important and innovative. Basic skills that are essential to performing jobs in a service industry are identified and then taught within the functional context of work so that the employee learns the basic skills that are important to performing his/her job well using the content knowledge associated with his/her job. Job-related basic skills instruction has been proven to be more effective in enhancing productivity on the job than general basic skills instruction (Sticht, 1987; Pelavin, 1991). No known comparable model or product currently exists for the health insurance industry. Use of computer-based instruction is important since many of the employees must use a computer terminal in their jobs. The proposed job-related curriculum, by raising the basic skills proficiency level of Pennsylvania Blue Shield employees, not only gives them the basic skills required to succeed in the workplace but also enhances their overall ability to cope with English reading, writing, math, and problem-solving on and off the job in an increasingly technical society. It is expected that this training will also improve the employees' chances for upward mobility within the company.

This model curriculum will be useful to health insurance companies throughout the nation as well as to the extensive network of Blue Shield companies across the United States. Use of an external evaluator and ISAL's involvement will ensure that model-building indeed occurs rather than simply the process of delivering instruction. The development of the curriculum, pilot testing of the course, and careful evaluation of the process and products will provide a model with national impact.

U.S. DEPARTMENT OF EDUCATION

Office of Vocational and Adult Education (OVAE)
Division of National Programs (DNP)

PROGRAM TITLE: National Workplace Literacy (CFDA 84.198)

PROJECT TITLE: A Legacy of Caring
Job Linked Skills Program (JLSP)

AWARD NUMBER: V198A20132

PROJECT DIRECTOR: Donna M. Cheatham
AWARDEE: Pennsylvania Blue Shield
ADDRESS: 1800 Center Street
Camp Hill, PA 17089-0089
TELEPHONE: (717) 730-8859

FUNDS BY:
FISCAL YEAR:

Federal:	FY 1992	$382,053
Non-Federal:	FY 1992	$392,071
Total Funds:		$774,124

Federal Funds - 49% of total funds

AWARD PERIOD: May 1, 1992 - October 31, 1993

FEDERAL PROJECT OFFICER: Sarah Newcomb
Division of Adult Education and Literacy
(202) 205-9872

OBJECTIVES: To develop and deliver by computer-based instruction a job-related basic skills program for the improvement of literacy skills, and workforce productivity.

PROCEDURES: To meet Pennsylvania Blue Shield employee needs, a computer-based model curriculum will be developed. Classroom instructors will screen and assess pre and post student skills and support classroom activities. Corporate management will support the effort by allowing course completion on "company time."

OUTCOMES/RESULTS/PRODUCTS: The computer-based training program will assist employees in improving their job related literacy skills. It will also provide a basis for an employee's upward mobility.

EDUCATIONAL LEVEL: Adult

TARGET POPULATIONS: Lower level entry workers

PLANNED NUMBER OF TRAINEES: 200

PARTNERS: Pennsylvania Blue Shield; Tri-County Opportunities Industrialization Center (OIC); Penn State's Institute for the Study of Adult Literacy (ISAL).

NATIONAL WORKPLACE LITERACY PROGRAM

Pennsylvania Blue Shield
Job Linked Skills Program (JLSP)
May 1, 1992 - October 31, 1993

I. PROGRAM PARAMETERS

1. Target number to be served: 200

2. Total number served: 268 (34% over target)

3. Federal funds obligated: $382,053

4. Matching funds in-kind: $392,071

6. Value release time: $112,097

7. Contact hours provided: 11,323

NATIONAL WORKPLACE LITERACY PROGRAM

Pennsylvania Blue Shield
Job Linked Skills Program (JLSP)
May 1, 1992 - October 31, 1993

II. PARTICIPANT DATA

	TOTAL STUDENTS	PERCENTAGE
RACE		
Latino/Hispanic American	3	1.1
Asian American	21	7.8
African American	75	28.0
Caucasian	169	63.1
	268	100.0
SEX		
Male	32	11.9
Female	236	88.1
	268	100.0
AGE		
18-25	60	22.4
26-33	101	37.7
34-41	52	19.4
42-49	44	16.4
50-57	11	4.1
	268	100.0

EDUCATION

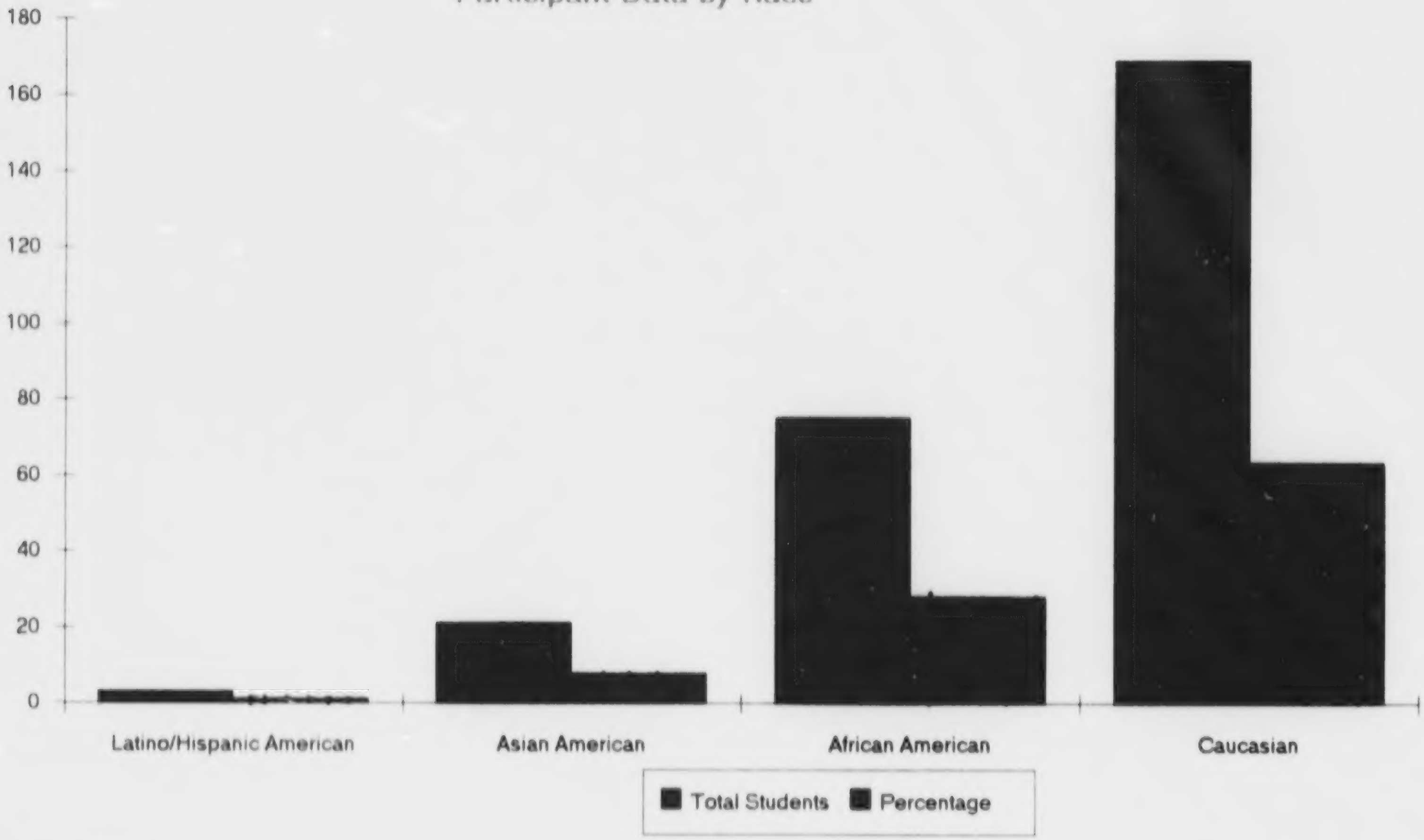
Grade 9 or less	2	0.8
Grade 10	3	1.1
Grade 11	4	1.4
Grade 12	193	72.0
GED	19	7.1
Non-English Diploma	7	2.6
Post High School Studies	40	15.0
	268	100.0

INCENTIVE

Paid Release Time	268	100.0
Bonus	0	0

National Workplace Literacy Program

Participant Data by Race



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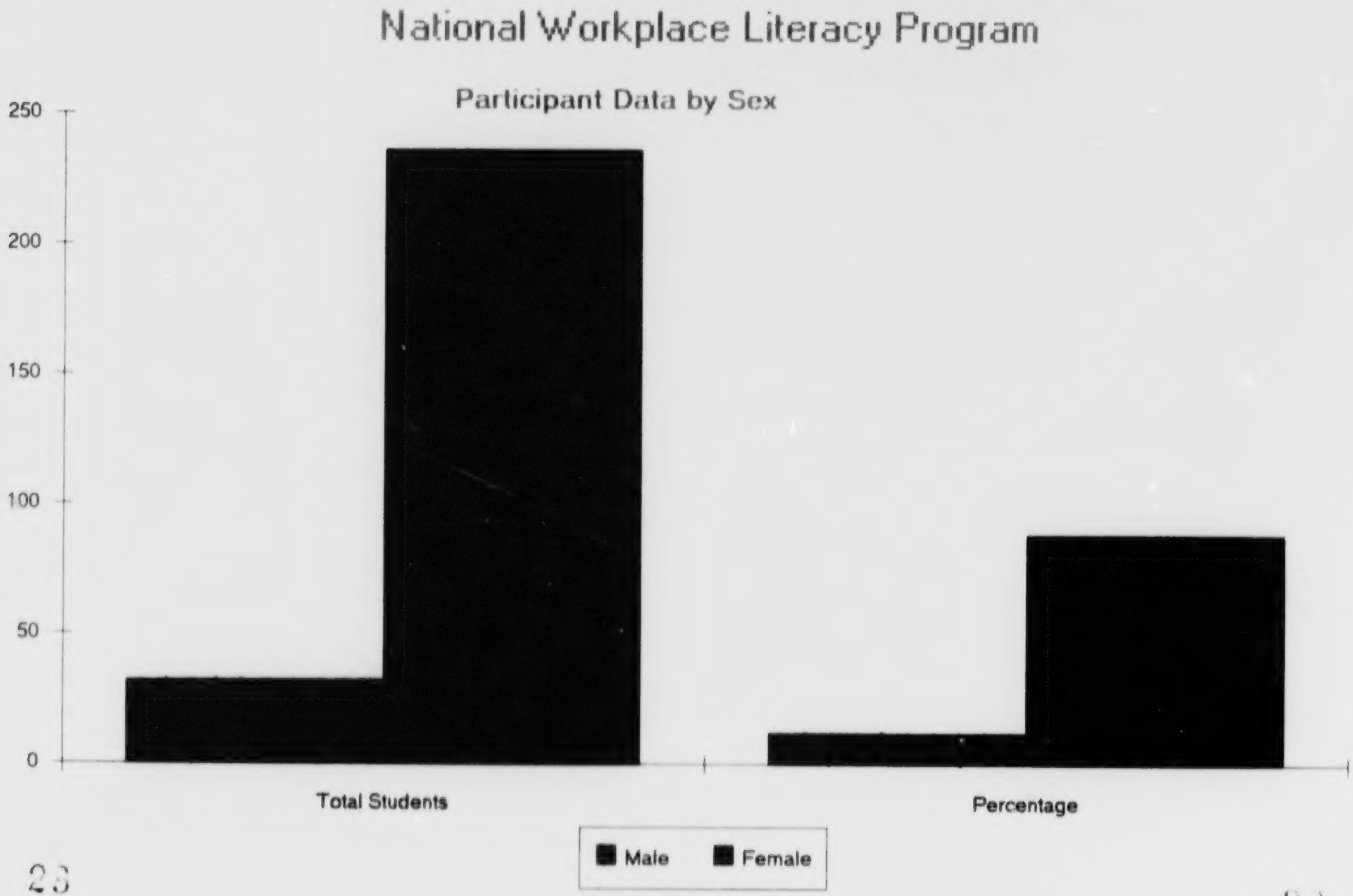

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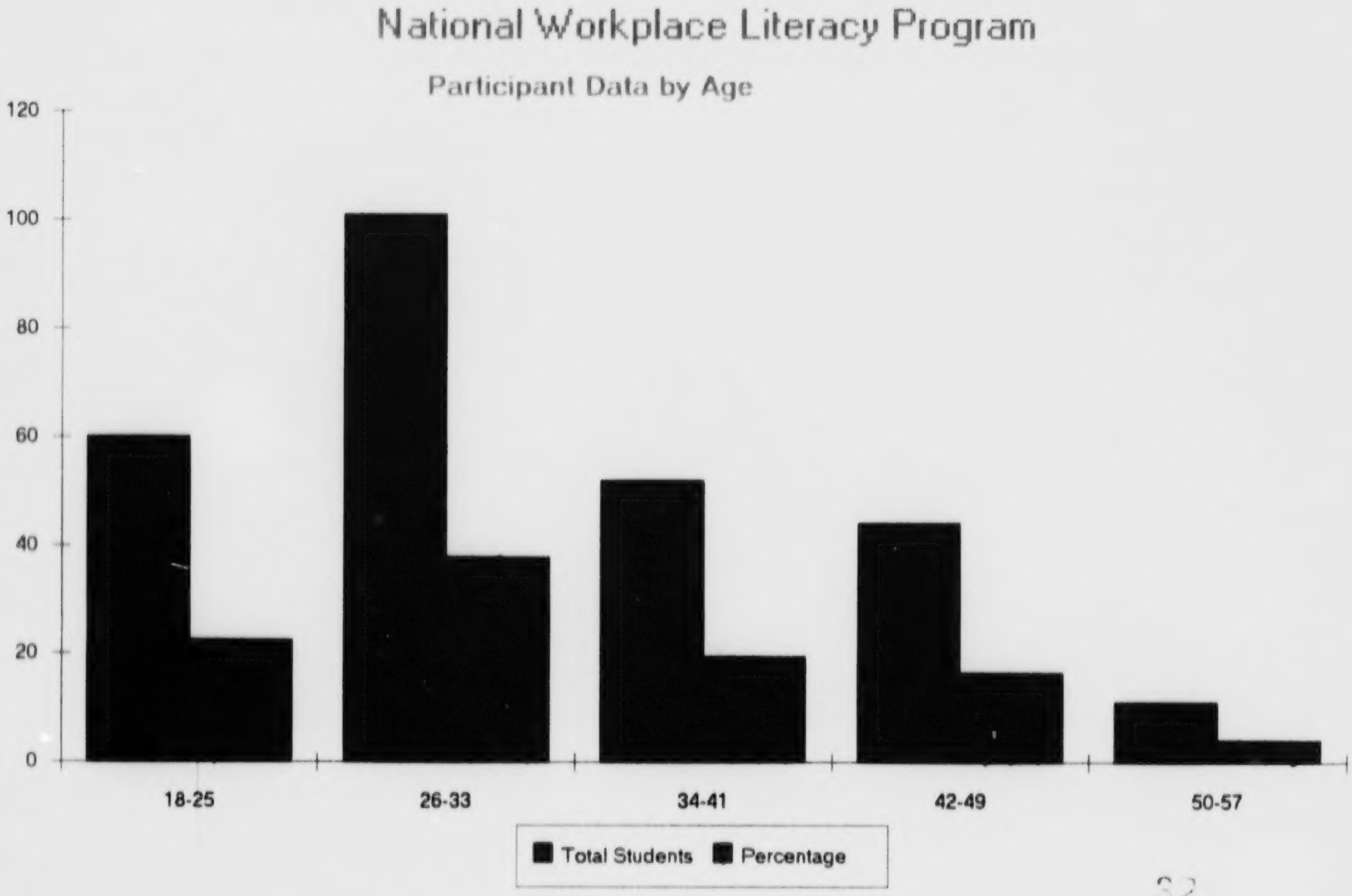

National Workplace Literacy Program

Participant Data by Age

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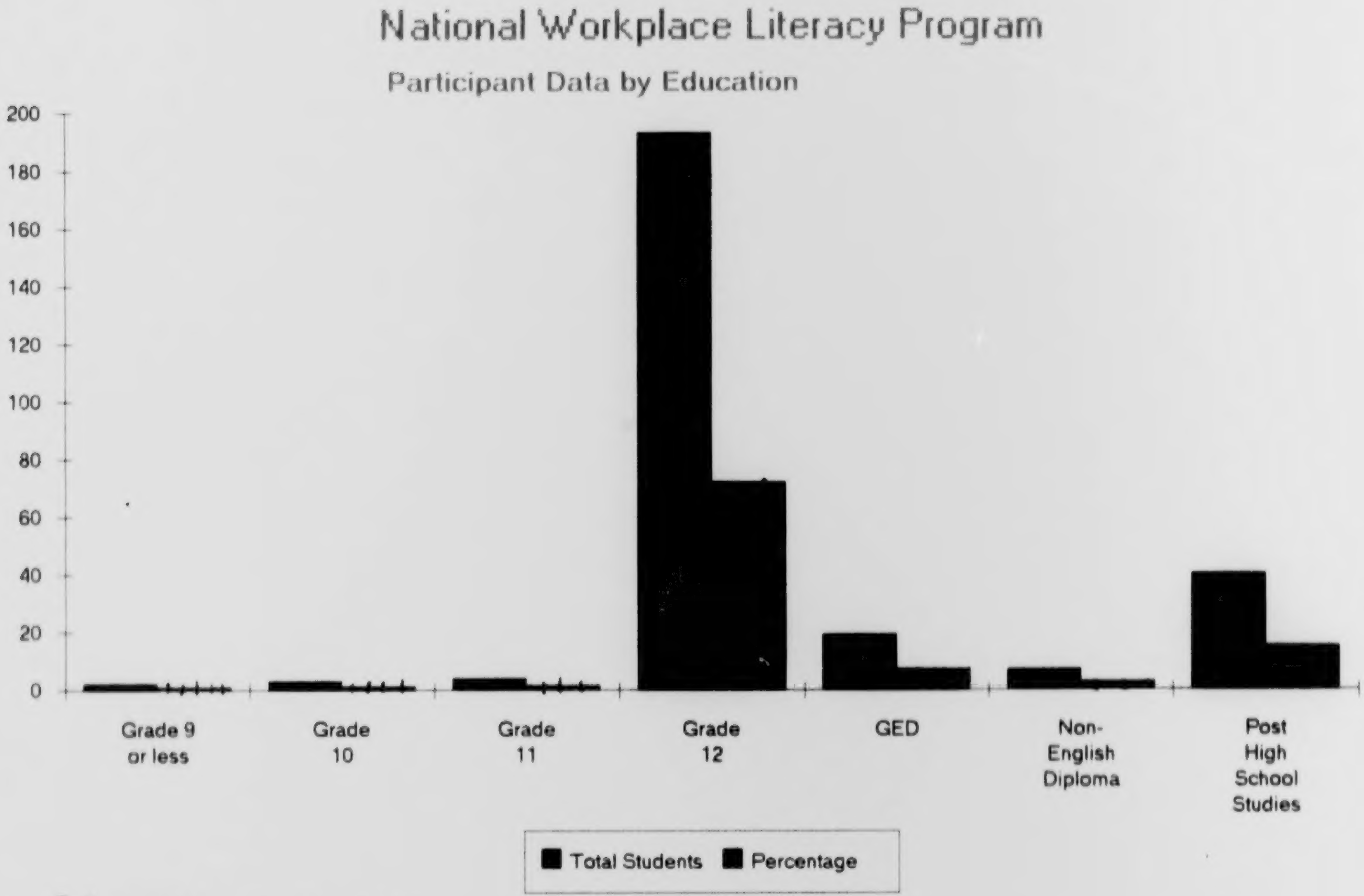
National Workplace Literacy Program

Participant Data by Education

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TASKS/PERFORMANCE INFORMATION

All tasks identified reflect the persons responsible for completion agreed upon delivery dates and actual project activity.

Abbreviations are as follows:

PBS	Pennsylvania Blue Shield
ISAL	Institute for the Study of Adult Literacy
OIC	Tri-County Opportunities Industrialization Center

FINAL PERFORMANCE REPORT FOR THE NATIONAL WORKPLACE LITERACY GRANT

Objective #1 **To develop a model curriculum to be delivered by computer-based instruction to teach the required literacy skills for the health insurance industry.**

1a. job-related computer-assisted instruction for basic skills instruction
1b. supplementary commercial software programs that can be customized to the workplace

TASK	PERSON	DATE	PERFORMANCE
1. Perform literacy task analyses for the targeted jobs.	ISAL	May - July 1992	Completed July 9, 1992. See Curriculum Development for additional detail.
2. Validate literacy task analyses with focus groups.	PBS ISAL OIC	May - July 1992	The Advisory Council approved task analysis July 21, 1992. Actual validation began with the first class, Aug 4, 1992.
3. Begin curriculum development.	ISAL	May - July 1992	Curriculum development began in June 1992.
4. Review commercial software for inclusion in program.	ISAL OIC	May - July 1992	Software was reviewed and selected to support the medical terminology and "writing clearly" modules.
5. Identify Advisory Council members from company personnel.	PBS	May - July 1992	Completed June 1992. Advisory Council met July 6, 1992. For Council information and minutes see Appendix A. Sample notes are included. Remaining minutes are on file.
6. Design curriculum.	PBS ISAL OIC	July 1992 - May 1993	Began July 1992 and continued until May 1993.
7. Submit curriculum for Advisory Council review and input.	PBS	July 1992 - May 1993	The Advisory Council, supervisors, trainers, and the focus group reviewed all curriculum and offered input. Revisions were made on an on-going basis as deemed appropriate.
8. Continue curriculum and software development.	ISAL	August- October 1992	Curriculum development progressed on schedule.

Objective #1 continued

TASK	PERSON	DATE	PERFORMANCE
9. Conduct employee focus groups on curriculum and instructional programs.	PBS OIC	August - October 1992	On August 4, 1992, the focus group began reviewing planned curriculum via "hands-on" experience and offered constructive input to improve modules and course content. The focus group consisted of 30 rather than the planned 50 employees. We limited the number of participants in the initial class and subsequent review activities to minimize any negativity that potentially could result during initial implementation.
10. Teachers customize commercial software.	OIC	August - October 1992	OIC customized commercial software to meet program needs. The Word Attack program was available August 4, 1992. Word Attack supports the medical terminology portion of the program.
11. Complete curriculum and software development.	ISAL	November 1992 - September 1993	All curriculum and software development was completed in May 1993.

Objective #2 **To develop screening and assessment instruments.**

TASK	PERSON	DATE	PERFORMANCE
1. Develop job-related screening and criterion-referenced assessments.	ISAL	May - July 1992	Penn State developed the Criterion Reference Test (CRT) based on specific course content. This test was administered on a pre- and post-class basis.
2. Field test assessment instruments for reliability and validity (n=50). Revise as necessary.	PBS ISAL OIC	August - October 1992	The first field testing occurred in October 1992. As a result of the pre-class scores and input from various areas (our council, teachers, Penn State, students), the CRT was revised considerably. Revisions were field tested with our focus group and found acceptable for use. The revised test was utilized on a post-class basis beginning December 1992 and continuing throughout the remainder of the program.
3. Identify screening instruments to determine student skill levels.	PBS ISAL OIC	June - September 1992	We initially screened students using the Test of Adult Basic Education (TABE) and the Everyday Problems Test. TABE was used throughout the project however the Everyday Problems Test was only administed with the focus group and the October class. It did not provide pertinent data relative to course content and/or skill levels and required too much of class time.
4. Develop an attitudinal survey for students.	PBS ISAL OIC	October 1992 - January 1993	An attitudinal survey was developed and approved by the partners and Advisory Council. Detail information is available in the curriculum section under Evaluation Instruments.

Objective #3 **To develop an instructor's manual to accompany the curriculum.**

TASK	PERSON	DATE	PERFORMANCE
1. Begin instructor's manual.	ISAL	May - July 1992	Development of the instructor's manual began on schedule with curriculum development in June 1992.
2. Continue instructor's manual development.	PBS ISAL OIC	August - October 1992	The instructor's manual was continually revised and updated based on revisions to the curriculum and/or the addition of new course modules.

Objective #4 **To offer instructor training workshops.**

TASK	PERSON	DATE	PERFORMANCE
1. Train teachers in 2-day workshop.	PBS ISAL	August - October 1992	Teachers received a one-day training session prior to our August 1992 class (focus group). Teachers also received a one-day workshop of information about the staff and employees with whom they would work. Specific concerns and potential challenges were discussed and resolutions identified.
2. Train teachers in 1-day workshop.	ISAL	November 1992 - September 1993	Additional training occurred as new modules and or revisions to the course were made available.
3. Ongoing teacher training and technical assistance.	PBS ISAL	November 1992 - September 1993	On-going teacher training and technical assistance was available based on need. The project director maintained close contact with teachers and provided/obtained technical and administrative assistance as necessary throughout the project.

Objective #5 **To implement the curriculum materials at Pennsylvania Blue Shield.**

TASK	PERSON	DATE	PERFORMANCE
1. Select and assess pilot groups (n=50) and begin instruction (8-9 wk. sessions).	PBS OIC	August - October 1992	**A pilot group (our focus group) began the JLSP in August 1992. We identified thirty (30) students to support this task. Recognizing the importance of a positive implementation, we reduced the participants to 30 and made up the difference in subsequent classes. Student skills were assessed prior to the start of the curriculum. The instructors, and project director worked closely with these students to foster a collaborative effort in course improvement and the marketing of this basic skills program in an "upbeat" manner. We were successful, 713 employees are enrolled, which is 10+% of our employee base.**
2. Revise program and curriculum based on pilot.	PBS ISAL OIC	August - October 1992	**Revisions began mid-August 1992. The focus group continued to provide valuable input throughout the project.**
3. Implement program with larger numbers of employees (n=150) (8-9 wk. sessions).	PBS OIC	November 1992 - September 1993	**Larger classes began a month ahead of schedule. The second JLSP class of 72 students began on October 19, 1992. Succeeding classes were composed of no more than 65 students in each session (10 per class). The goal of 200 students was surpassed.**

Objective #6 **To acquaint supervisors with the specialized training program.**

TASK	PERSON	DATE	PERFORMANCE
1. Explain the program to supervisors.	PBS ISAL OIC	August - October 1992	Meetings were scheduled by the project director with the corporate vice presidents to explain the program and solicit their support and obtain a supporting commitment to the program. Vice presidents made commitments to provide a minimum of a specified number of participants for each of the planned training sessions. Meetings were then held with all directors, managers, and supervisors to explain the program, including how management can support the student's efforts and course content and the anticipated results. Positive feedback was received during these sessions and many questions regarding "literacy" and the skill needs of our employees were discussed. Other partners were in attendance at these meetings.
2. Interface with management as needed to maintain open lines of communication.	PBS	August 1992 - October 1993	Ongoing communication was provided on a monthly basis to various managers who had participants in the program. Periodic contacts were made at the conclusion of each class session to various managers for input and insight from their perspective on the impact the program was having on their employees and/or their work environment. Feedback was voluntarily provided by management to the project director. Took the project director routinely met with supervisors and managers at the conclusion of each 10-week session to solicit management input and feedback.

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Objective #7 **To evaluate the course in both formative and summative phases.**

TASK	PERSON	DATE	PERFORMANCE
1. Develop evaluation instruments	PBS ISAL OIC Evaluator	August - October 1992	We began identification and development of evaluation instruments in July 1992. The Everyday Problems Test, the TABE test, the Student Attitude Survey, the Criterion Reference Test (CRT), and the Teacher and Administrator Surveys were all instruments identified for use by the evaluator to summarize performance indicators.
2. Formative evaluation of curriculum materials and procedures (ongoing).	PBS ISAL OIC Evaluator	August - October 1992	Emory Brown conducted on-going evaluation activity during the project. He attended planning sessions, Advisory Council meetings, and partner meetings to remain actively involved in the project's development and implementation. He talked regularly with the project director and was responsive to management's requests to remain an active participant in all aspects of the project.
3. Conduct summative evaluation.	Evaluator	November 1992 - September 1993	Once the course was implemented, Mr. Brown met with students and teachers at the middle and end of the ten-week course to remain abreast of attitudes, needs, and wants of the respective parties. Input was then provided to the project director for action as appropriate. Interim reports were written and are on file.
4. Complete summative evaluation.	Evaluator	October 1 - October 31, 1993	The summative evaluation was completed in January 1994 at the conclusion of the project period.

Objective #8 **To disseminate the findings and information on obtaining the course, including the computer-assisted instruction modules, and the accompanying manuals.**

TASK	PERSON	DATE	PERFORMANCE
1. Disseminate information about programs and materials (ongoing).		November 1992 - September 1993	Dissemination activity has been numerous and varied. Actual dissemination efforts are included in Section V of this document.
2. Begin distribution of materials at cost.		January 1994	Materials were available for distribution in January 1994.

OUTCOMES

Pennsylvania Blue Shield obtained the services of The SME Group (David W. Shively) to conduct a detailed evaluation of the Job Linked Skills (JLS) Program. Significant outcomes were identified. Exerts and charts from Mr. Shively's final report follows.

- "**Student performance improves.** For those students whose scores fall within the measurement range of our tests, JLS participants continue to show significant improvement in both their vocabulary-comprehension and their grammar-expression scores. Charts A and B (appended) show pre-test and post-test grade levels (TABE Assessment) for the two test sections respectively. Charts C and D are histograms showing the amount of improvement for each test section.

- **The program has strong employee support.** Overall employee satisfaction with the JLS course remains uniformly positive. While individual levels of enthusiasm vary, students are generally pleased about their participation both before and after taking the class. Class satisfaction ratings collected by the project's federal evaluator remain about 90% positive. This satisfaction level remains consistent, regardless of the students' test scores.

- **Timing is important.** There is overwhelming support for the policy of offering JLS classes during working hours. Many students have said that they would not have been able to participate had the classes not been offered during working hours.

- **The content has become increasingly appropriate.** Despite the significant proportion of participants who scored above the 99th percentile in the general literacy test administered prior to the start of classes, very few students expressed any dissatisfaction with the content of the classes. This result is no doubt influenced by the increasingly job-specific nature of the Pennsylvania Blue Shield JLS classes. When examined by class grouping, grade-level improvements show an upward trend which parallels the effort to make the course content consistent with employees' job responsibilities. (See Chart E)

- **Neither employee age nor length of service have an effect** on JLS class performance. Our analysis showed an almost complete lack of correlation between class performance and either age or length of service at Pennsylvania Blue Shield. This suggests that younger workers perform no better or worse than their older counterparts, and that JLS participation can be just as beneficial to a new employee as to one who has been with the firm for decades.

- **Race and formal education remain predictors** of both pre-test and post-test scores for those students whose pre-test scores fall within the test range. (See Chart F). We noted this trend in our interim report. It has continued for all class sessions, though it is becoming less pronounced as the total number of participants increases. Asians have the lowest scores, following by blacks, then whites. However, those with lower pre-test scores also generally show greater improvement in their post-test scores than do those with higher pre-test scores.

  Mr. Shively cautioned in interpreting these findings, since they may be the results of test bias and since we have insufficient data to firmly correlate grade-level improvement with actual on-the-job performance. Race was also a predictor of test scores in the recently-published *Adult Literacy in America*, which contained the results of a national adult literacy survey. This suggests that the Pennsylvania Blue Shield results may merely mirror a national norm.

- **Language may be a barrier.** There is a small percentage of students for whom English is not their native language. These employees show markedly lower pre-test scores, although their rates of improvement are similar to those of other students. Courses specifically tailored for those for whom English is a second language may be a worthwhile addition to the in-house curriculum.

- **Work volume does not suffer** as a result of JLS class participation. While some students showed a short-term drop in their work output after taking the JLS course, output levels returned to normal as time progressed. We assume that employees work more carefully, therefore more slowly, when they first apply what they have learned to their jobs. Speed returns once the new skills have been thoroughly mastered.

- **Quality is extremely difficult to measure.** Several different strategies failed to capture sufficient information to permit conclusions regarding pre-class and post-class work quality. These measurements included both JLS students and a control group of non-students. This experience suggests some procedures which might be implemented to improve the tracking of work quality.

- **Patterns of transfers and promotions** among JLS students show trends which suggest that those students who recently improved their skills were more likely to be promoted *than those who already had those skills*. (See Chart G) It is a prime indicator of the role of motivation in employee work place performance.

- **There are beneficial effects on employee attitudes.** Employees who have been through the JLS program appear to be more confident, more comfortable with change, and more cognizant of the importance of continuing education in the work place. Chart H presents a summary of a Life Long Learning survey designed to gather employee opinions on continuing education in the work place."

JLS Grade-Level Improvement: The TABE Scores

"The Test of Adult Basic Education was the primary assessment tool for evaluating student performance in the JLS Program. SME reviewed improvement in grade-level scores for the verbal and written skill test sections for those students whose initial TABE test scores fell below the "12.9+" TABE maximum score (i.e., all those for whom any improvement was possible). Statistics showing mean, standard deviation, etc. for both test sections are provided below. They show an average grade-level improvement of .722 for the vocabulary-comprehension section and 1.127 for the mechanics-expression section. The standard deviations indicate more variability in the mechanics-expression scores than the vocabulary-comprehension scores. The range of 15.1 for the mechanics-expression scores results from one or two scores which were significantly out of line with those of the majority of students.

Grade Level Improvement for TABE Pre-Test <12.9+

Mechanics		**Vocabulary**	
Mean	1.127985	Mean	0.722941
Median	.95	Median	0.7
Mode	1.2	Mode	0.4
Standard Deviation	1.91834	Standard Deviation	1.14822
Range	15.1	Range	7.2
Minimum	-8.7	Minimum	-2.7
Maximum	6.4	Maximum	4.5
Count	134	Count	85

There is an important fact buried in these statistics which shows that the more recent JLS classes have been reaching employees who really needed the program. In our preliminary report, we noted that fully 20% of students finished the course with post-test scores which were off the high end of the measurement scale. The final data show fewer than 10% of students with post-tests at the top of the scale, yet the average grade level improvement for these students has not decreased. This suggests that the JLS classes increasingly reach the students who really need the help.

Four charts appear on the following pages. Charts A and B show pre-test and post-test grade levels for the verbal skills and written skills portions of the TABE test for those students whose pre-test scores fell within the TABE measurement range. Following these are two histograms (Charts C and D) showing the range of grade-level improvement for the same sections of the TABE test. Note that these histograms show counts for **ranges of improvement**. Thus the count for .25 includes all students whose improvement ranged from .25 to .4999, the count for .5 includes students with scores ranging from .5 to .7499, etc.

We can conclude that, for those students whose performance fell within the measurement range of the TABE test, there were significant grade-level improvements in both areas. Our federal evaluator's "rule of thumb" for TABE improvement is that, for a ten-week course, anything approaching a 1.00 grade level improvement is really impressive. The verbal skill scores are approaching that mark, and the written skills scores exceed it.

Performance by Racial Grouping

We noted earlier that race remains a predictor of both pre-test and post-test scores for those students whose scores fall within the range of the TABE test. This mirrors experience at the national level with the study *Adult Literacy in America*, recently conducted by the Educational Testing Service for the National Center for Educational Statistics. Both studies found that Asian Americans tested at the lowest levels, followed by blacks, then whites. We believe that this finding is a reflection of a broad national situation, rather than a situation specific to Pennsylvania Blue Shield.

The rate of improvement by racial grouping mirrors this finding for language mechanics: whites improve the most, then blacks, then Asian Americans. For vocabulary, however, Asians and blacks show more improvement than whites, though the differences are small. Chart F shows these comparisons.

Performance by Job Classification

JLS students were primarily employees in pay grade levels GR2 through GR9. We tested correlation to determine whether there was any relationship between employees' job classification and either pre-test scores or grade-level improvement. We found a weak relationship (.276 to .318) between job grade levels and pre-test or post-test scores. However, there was no relationship between pay grade levels and JLS grade-level improvement. This suggests that employees at lower pay grade levels are just as likely to see significant improvement in their scores as those at higher levels.

The Criterion Reference Test

Penn State's evaluating team recognized that, as the JLS curriculum became increasingly job-specific, the TABE test might be a less reliable indicator of actual class performance. As a result, the team developed a criterion reference test (CRT) to measure pre-test and post-test performance in reading, grammar, forms, and vocabulary. For purposes of this study, SME had access to 35 CRT scores from the JLS class which began in January, 1993. To assess the difference in class performance as demonstrated by the CRT and TABE tests, we ran correlations on the pre-test and post-test CRT and TABE scores. We found a high degree of correlation (.68 to .75) between both pre-test and post-test CRT and TABE scores for this class. This suggests that high pre-test or post-test CRT scores are associated with high pre-test or post-test TABE scores.

This correlation, however, does not hold true to the amount of increase in scores. Correlation between TABE improvement and CRT improvement ranged from .12 to .15. In other words, a large increase in a TABE score is not necessarily associated with a correspondingly large increase in the CRT score. This suggests that the two tests may actually be testing different skills, as was intended. However, for the purposes of this study, we deemed the TABE test an adequate predictor of CRT test performance and did not evaluate CRT scores any further.

The Role of Other Demographic Factors

One of the goals of this project was to establish, to the extent possible, a profile of those employees who benefit the most from the JLS course. To that end, we sought to correlate both JLS performance and pre-test results with a number of external variables. These correlations would enable us to predict those employees whose job performance would most likely benefit from the JLS course.

As part of this assessment, we collected data for JLS participants on both employee age and length of service with Blue Shield. We then correlated these data against both the TABE pre-test scores (a measure of pre-course literacy levels) and JLS performance, expressed as the increase in grade level equivalence after taking the JLS course.

We found an almost total lack of correlation between either age or length of service and pre-test scores or JLS performance. This suggests that neither employee age nor the length of service at Pennsylvania Blue Shield is a predictor of how much an employee might benefit from taking the JLS course. Older employees performed as well as their younger colleagues. Employees relatively new to Pennsylvania Blue Shield were just as likely to benefit as those who have worked in the firm for decades."

Chart A
Pre-test & Post-test Grade Level
Vocabulary - Pre-test<13

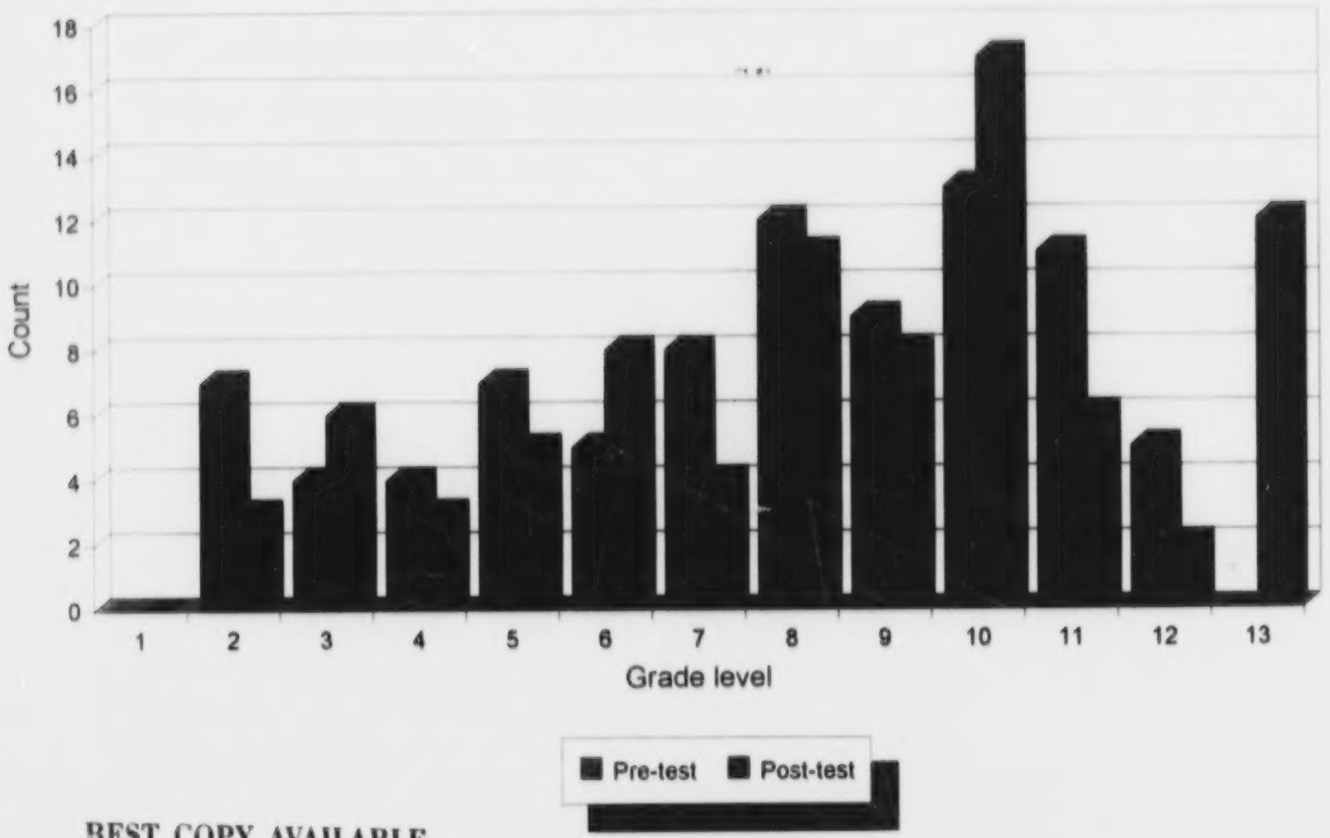

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Chart B
Pre-test & Post-test Grade Levels
Mechanics - Pre-test<13

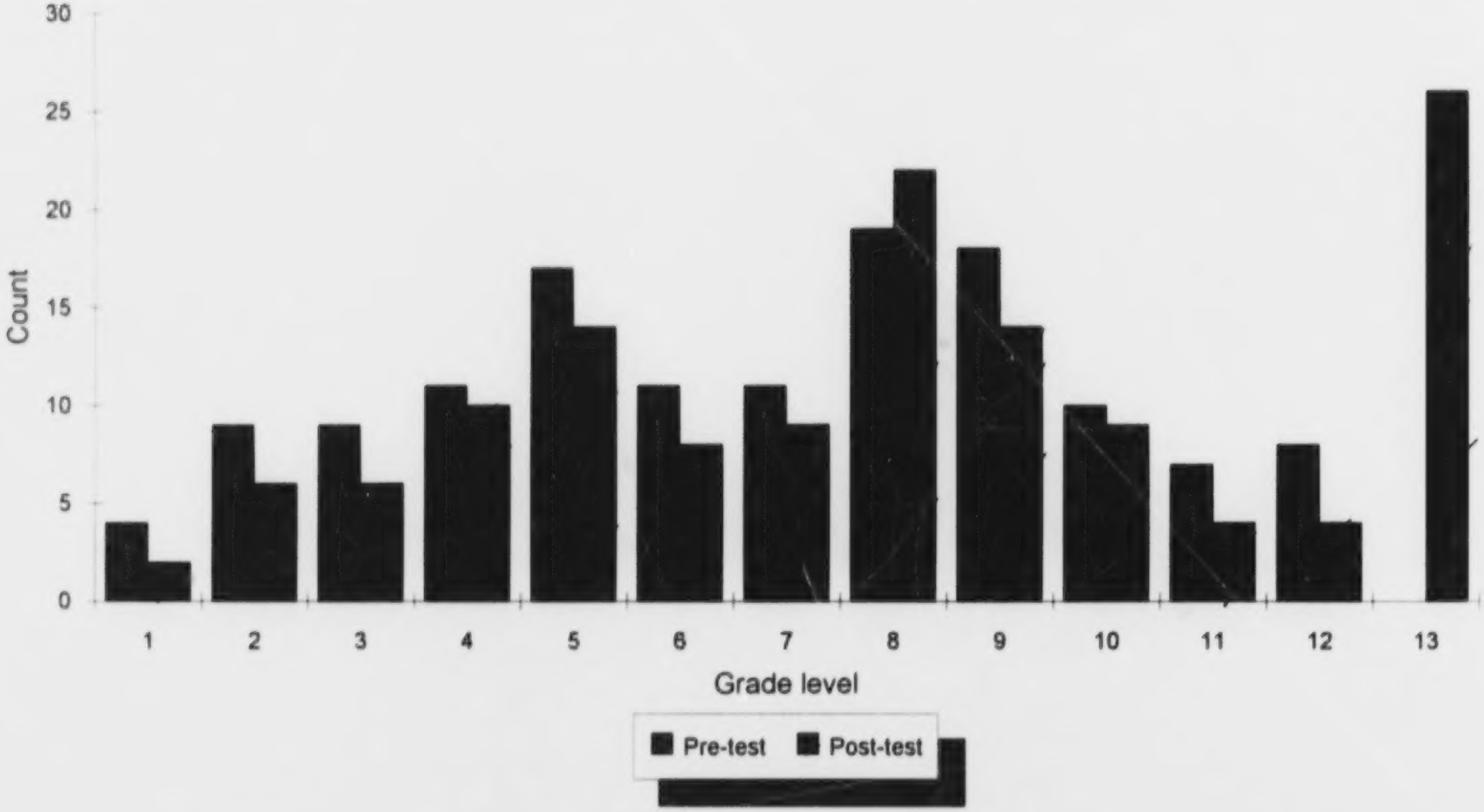

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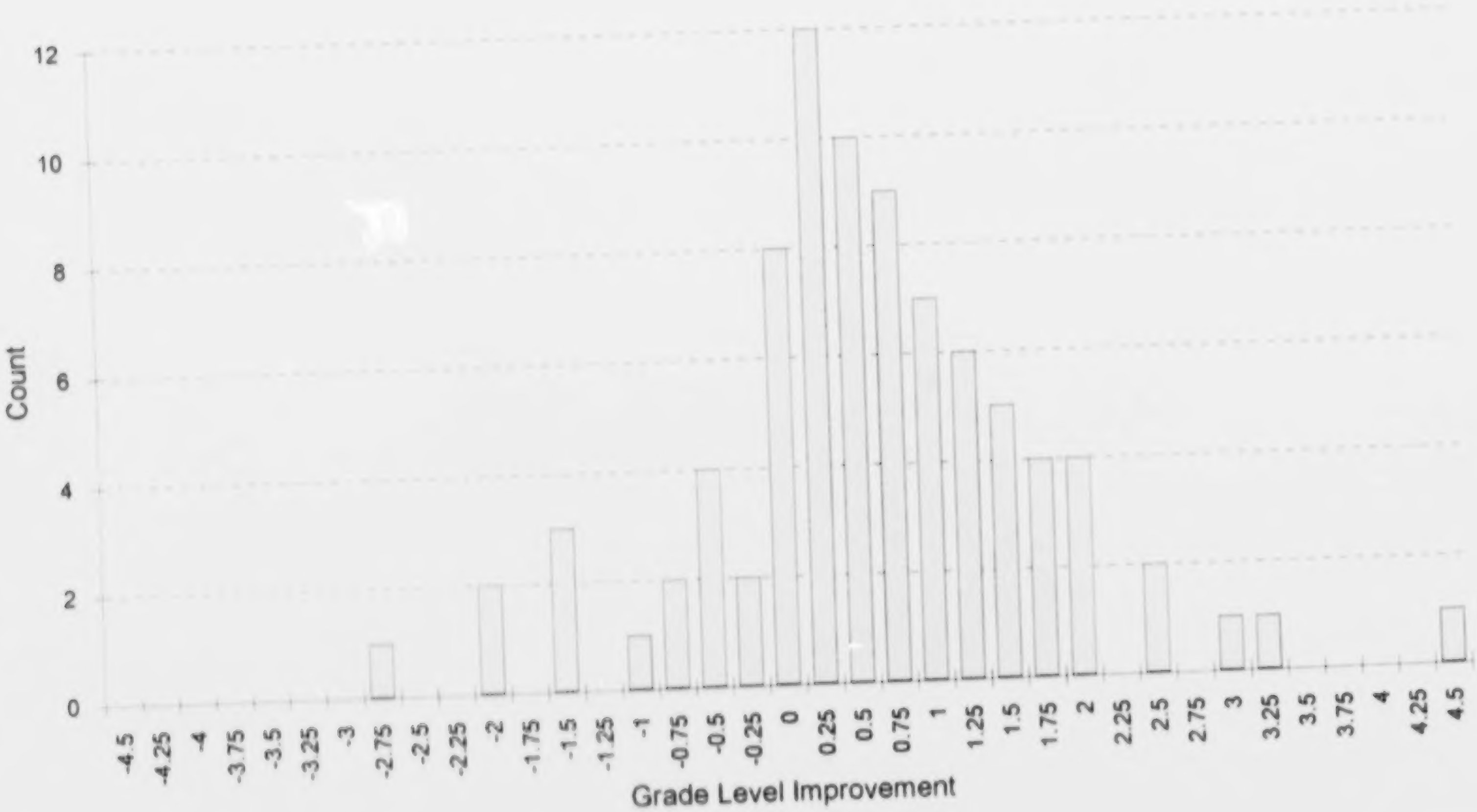
Chart C
Grade Level Improvement
Vocabulary - N=85



The SME Group - 1993

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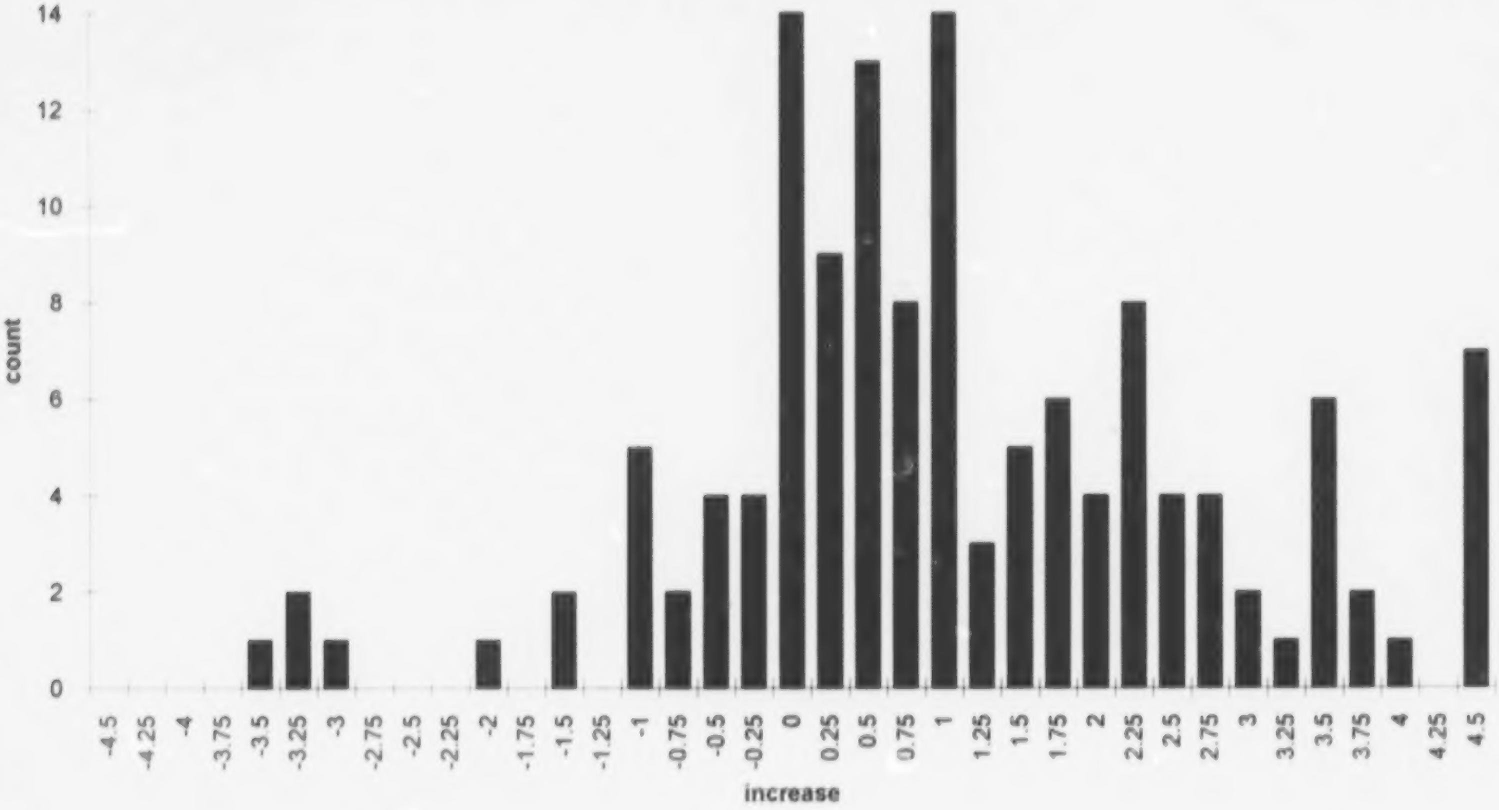
Chart D
Grade Level Improvement
Mechanics - N=133



The SME Group - 1993

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Chart E
Mean Grade Improvement
by Class Session

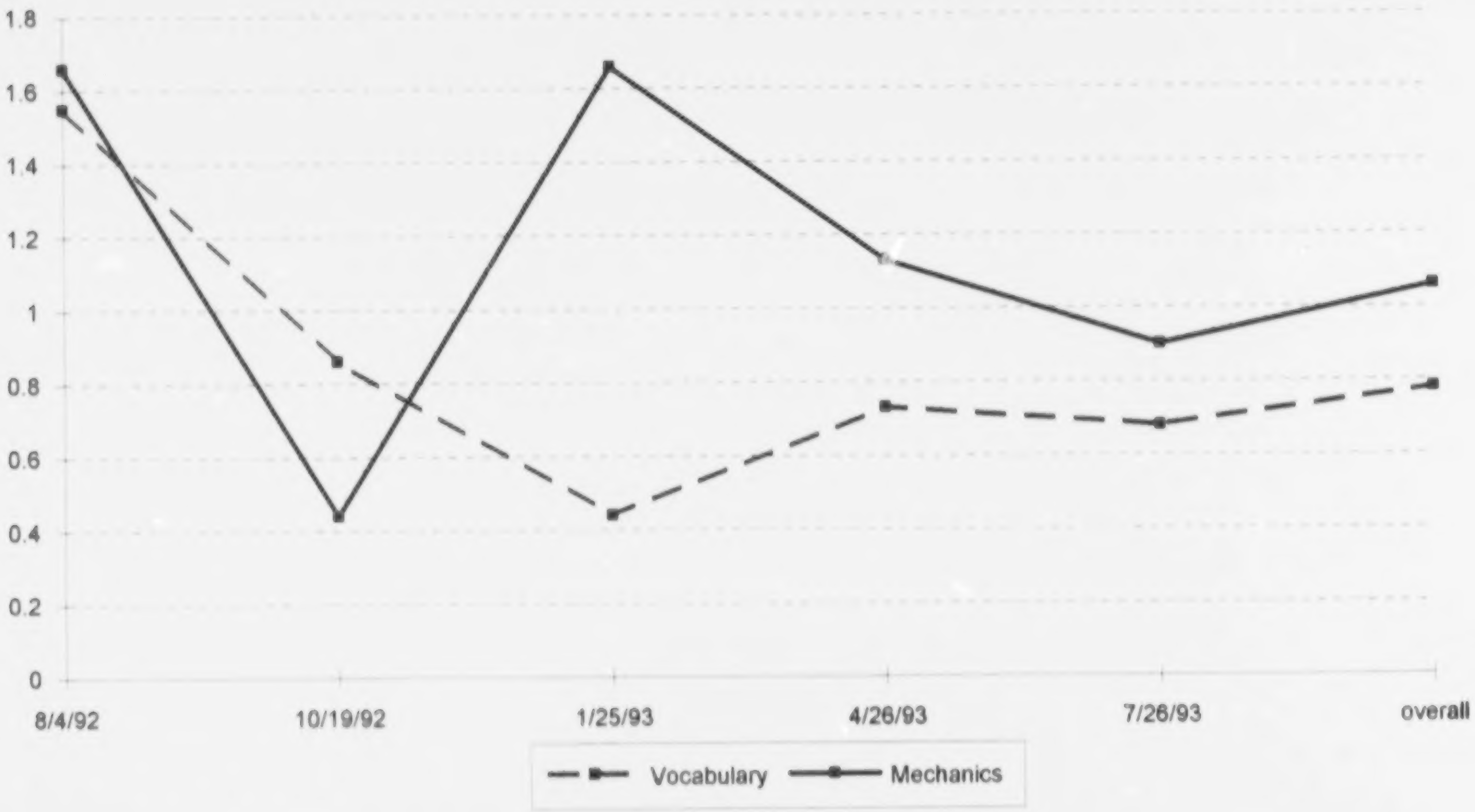

Chart F
Grade-level Scores by Racial Grouping
Pre-test <12.9+

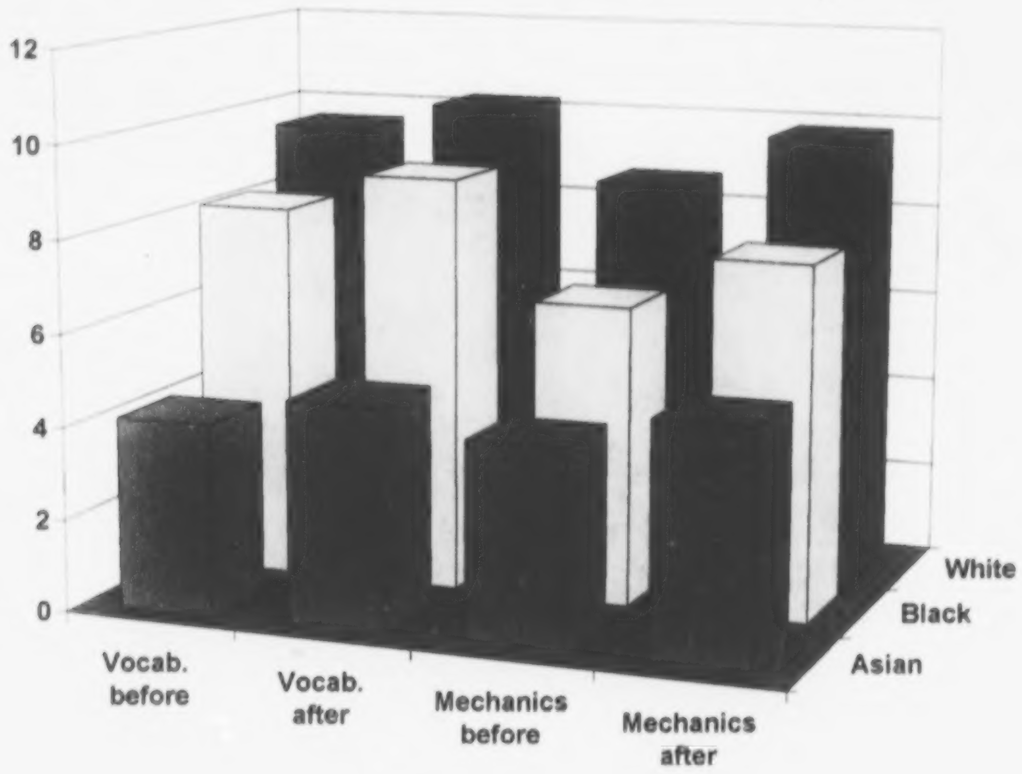

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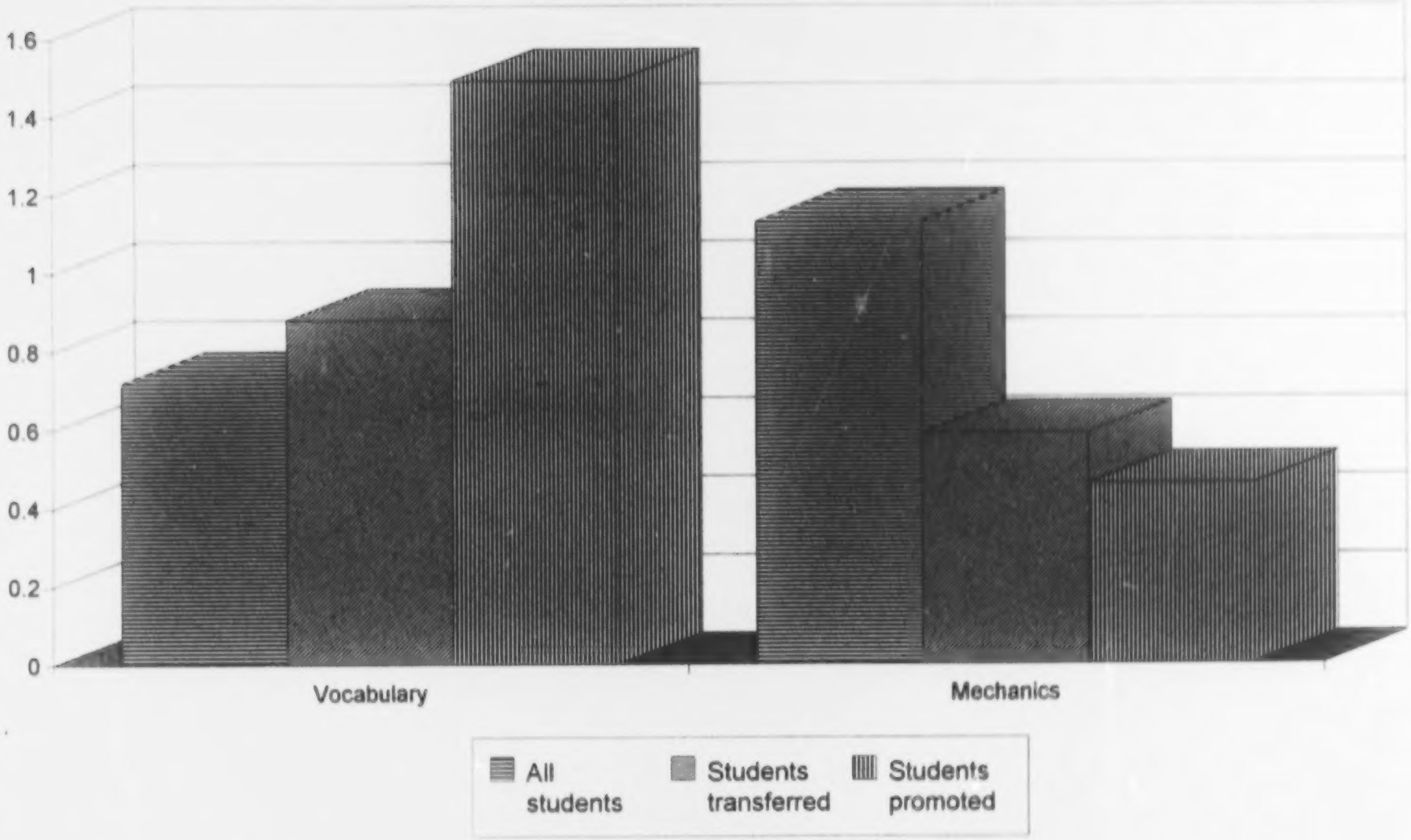
Chart G - Job History & Grade level Change
Pre-test <13



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CURRICULUM DEVELOPMENT

The Institute for the Study of Adult Literacy was responsible for the JLSP curriculum and software development. Institute projects use the functional context approach to instruction; that is, the workplace becomes the relevant context in which basic skills instruction is embedded. Institute staff spent many days over a period of several months to determine the major job tasks of the five targeted occupations within Pennsylvania Blue Shield (PBS).

PBS has two major divisions: Medicare and Private Business. The job tasks are different for the two divisions due to the elaborate governmental requirements associated with the Medicare program. The targeted positions, as identified by PBS, were: Claims Examiner (Medicare), Claims Analyst (Private Business), Correspondent (Medicare), Customer Service (Private Business), and Claims Reviewer. These positions were selected for the following reasons: (1) Productivity and quality are always a concern in processing claims; (2) Needs assessment data indicated that workers in these positions had literacy needs--that some of these employees could be considered marginally literate; (3) Workers in lower level occupations could be promoted into these positions, improving their basic skills needed for these jobs; (4) Management is committed to greater diversity in the workforce, and these positions are entry-level for the supervisory positions.

Literacy task analyses were conducted for these positions. The major job tasks of each position were identified by observation, interviews, and inspection of work materials. The basic skills required for these job tasks were identified and categorized according to the Comprehensive Adult Student Attainment System (CASAS) skills framework.

The job tasks and related basic skills were next divided into modules, beginning with Module 3. The job tasks are presented in job-related scenarios, engaging the learners in tasks that they must solve. They must apply basic skills (reading, writing, math, problem solving) in order to complete these tasks. Critical thinking and metacognitive (learn to learn) skills are also engaged as they must decide what information they need and what prior knowledge they already have. At any point that the learners do not know how to perform the job tasks, they can enter a tutorial which teaches the necessary basic skills in the context of the job task.

Module 1 was also developed to orient learners to the computer software, teaching them how to select from the menu choices and navigate through the software using on-screen "buttons." Since the software is completely learner-driven, learners need to know how to quit when they want to, how to see their progress on their individual learner data disks, and so forth.

Module 2 teaches medical terminology which was deemed to be necessary for all the targeted positions. *Mary's Story*, which uses the narrative form to teach medical terminology, became the first content module in the JLSP software.

CLAIMS EXAMINER (MEDICARE)

Job Tasks

The main task of the Claims Examiner (Medicare) is to enter claim information onto the computer system. The following are the steps the examiner takes and the basic skills needed to perform the task:

JOB TASK	SKILLS NEEDED
1. Receives claims from clerk	
2. Finds appropriate information on claim to enter into computer NOTE: In Medicare, almost all claims forms are the same; there are only a few unusual forms, so most times the information is found in the same section of the claim.	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to job Reads and interprets forms
3. Enters information onto computer	Reads and interprets general vocational vocabulary Identifies abbreviations and symbols specific to job Reads directions and interprets basic computer materials

4. Checks to see if procedure is appropriate for the diagnosis To do this, analyst uses manuals. Find the procedure listed. These are found in manuals according to the type of procedure it is. The manuals are tabbed and organized systematically. If the procedure is not appropriate for the diagnosis, claim is refused.	Reads and interprets vocational vocabulary Utilizes reference materials in manuals Reads and locates information lists in alphabetical order Utilizes table of contents, index, and appendices in manuals Reads and interprets charts and tables Demonstrates ability to sort, classify, and differentiate information
5. If information concerning patient or provider is not complete, uses computer program to find the complete information	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to the job Reads directions and interprets computer instructions
6. Checks for error messages and acts on them	Reads and interprets vocational vocabulary Utilizes reference materials in manuals Reads directions and interprets basic computer materials
7. Sends incomplete forms to appropriate department	Reads and interprets vocational vocabulary Reads and interprets forms Identifies situations in which action should be preceded by getting prior consent or advice from supervisor

8. Asks for help when information is not clear	Identifies situations in which action should be preceded by getting prior consent or advice from supervisor
9. Makes changes in manuals according to information received in memos	Reads and interprets vocational vocabulary Utilizes reference materials in manuals Reads and interprets written instructions from supervisor Reads and interprets specific information from memos Utilizes table of contents, index, and appendices in manuals Reads and interprets charts, graphs, tables, and forms Changes information according to instructions

CLAIMS ANALYST (PRIVATE BUSINESS)

Job Tasks

The main task of the Claims Analyst (Private Business) is to enter claim information onto the computer system. The following are the steps the analyst takes:

JOB TASKS	SKILLS NEEDED
1. Receives claim from clerk	

2. Finds appropriate information on claim to enter into the computer	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to job Reads and interprets forms
3. Enters information onto computer	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to job Reads directions and interprets basic computer materials
4. If information concerning patient or provider is not complete, uses computer program to find the complete information	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to job Reads directions and interprets computer instructions
5. Reads accompanying documentation to gather information	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to job Reads and interprets forms Reads and interprets specific information from written materials Utilizes reference materials in manuals

6. Reads medical notes including surgical notes to gather information to enter into computer	Reads and interprets general vocational vocabulary Reads and interprets specific information from written materials Identifies abbreviations and symbols specific to the job Reads and interprets tables, graphs, charts, and forms
7. Checks for error messages (suspensions and acts on them	Reads and interprets general vocational vocabulary Utilizes reference materials in manuals Reads directions and interprets basic computer materials
8. Sends incomplete forms to appropriate department	Reads and interprets general vocational vocabulary Reads and interprets forms Identifies situations in which action should be preceded by getting prior consent or advice from supervisor
9. Asks for help when information is not clear	Identifies situations in which action should be preceded by getting prior consent or advice from supervisor

10. Makes changes in manuals according to information received in memos	Reads and interprets general vocational vocabulary Utilizes reference materials in manuals Reads and interprets specific information from memos Reads and interprets written instructions from supervisor Utilizes table of contents, index, and appendices in manuals Reads and interprets charts, graphs, tables, and forms Changes information according to instructions

CORRESPONDENT (MEDICARE)

Job Tasks

The main task of the Claims Correspondent (Medicare) is to examine and respond to inquiries from providers and beneficiaries.

JOB TASK	SKILLS NEEDED
1. Receives inquiries	

2. Reads inquiries to determine nature of problem	Reads and interprets vocational vocabulary Reads and interprets specific information from written materials
3. Checks appropriate information regarding that particular claim (could be information regarding beneficiary or provider or both). Information found both in paper copy (manuals and memos) and on the computer	Reads and interprets vocational vocabulary Reads and interprets charts, graphs, and forms Reads and interprets information on computer screen Uses computer to find information

4. Checks appropriate references to make decision regarding inquiry (information found both in hard copy and on computer)	Reads and interprets general vocational vocabulary Utilizes reference materials Identifies abbreviations and symbols specific to the job Reads and interprets specific information from written materials Utilizes table of contents, index, and appendices in manuals Reads and interprets charts, graphs, tables, and forms Reads and interprets basic computer materials Uses computer to find information Reads and interprets information on computer screen
5. Makes proper decision based on gathered information	Demonstrates ability to differentiate, sort, and classify information Identifies effective problem-solving strategies

6. Prepares letter to be sent to inquirer using pre-written paragraphs	Reads and interprets general vocational vocabulary Utilizes reference materials Identifies abbreviations, symbols, and codes found in the job Reads and interprets specific written materials Reads and interprets charts, graphs, tables, and forms Reads directions and interprets basic computer materials Records requested information on forms
7. Writes paragraphs for letters	Utilizes appropriate mechanics of standard English Writes information in clear, logical, and complete manner Uses computer for simple word processing
8. Completes form on computer	Reads and interprets general vocational vocabulary Identifies abbreviations, symbols, and codes found in the job Reads and interprets specific written materials Reads directions and interprets basic computer materials Records requested information on forms

9. Asks for help when information is not clear	Identifies situations in which action should be preceded by getting prior consent or advice from supervisor
10. Makes changes in manuals according to information received in memos	Reads and interprets general vocational vocabulary Utilizes reference materials in manuals Reads and interprets specific information from memos Reads and interprets written instructions from supervisor Utilizes table of contents, index, and appendices in manuals Reads and interprets charts, graphs, tables, and forms Changes information according to instructions

CUSTOMER SERVICE (PRIVATE BUSINESS)

Job Tasks

The main task of Customer Service is to examine and respond to inquiries from providers and beneficiaries, both in written form and on the telephone.

JOB TASK	SKILLS NEEDED
1. Receives written inquiries	

2. Reads inquiries to determine nature of problem	Reads and interprets vocational vocabulary Reads and interprets specific information from written materials
3. Answers telephone and listens to inquiry, asking necessary questions	Utilizes note-taking skills while listening Formulates and asks questions Utilizes acceptable English Engages in appropriate social interaction Initiates action in response to requests from customers
4. Checks appropriate information regarding that particular claim (could be information regarding beneficiary or provider or both). Information found both in paper copy (manuals and memos) and on the computer	Reads and interprets general vocational vocabulary Reads and interprets charts, graphs, and forms Reads and interprets information on computer screen Uses computer to find information

5. Checks appropriate references to make decision regarding inquiry (information found both in hard copy and on computer)	Reads and interprets general vocational vocabulary Utilizes reference materials Identifies abbreviations and symbols specific to the job Reads and interprets specific information from written materials Utilizes table of contents, index, and appendices in manuals Reads and interprets basic computer materials Reads and interprets charts, graphs, tables, and forms Uses computer to find information Reads and interprets information on computer screen
6. Makes proper decision based on gathered information	Demonstrates ability to differentiate, sort, and classify information Identifies effective problem-solving strategies

7. Gives oral answers to inquiries	Utilizes note-taking skills while listening Formulates and asks questions Utilizes acceptable English Engages in appropriate social interaction Initiates action in response to requests from customers
8. Prepares letter to be sent to inquirer using pre-written paragraphs	Reads and interprets general vocational vocabulary Utilizes reference materials Identifies abbreviations, symbols, and codes found in the job Reads and interprets specific written materials Reads and interprets charts, graphs, tables, and forms Reads directions and interprets basic computer materials Records requested information on forms
9. Writes paragraphs for letters	Utilizes appropriate mechanics of standard English Writes information in clear, logical, and complete manner Uses computer for simple word processing

10. Completes form on computer	Reads and interprets general vocational vocabulary Identifies abbreviations, symbols, and codes specific to the job Reads and interprets specific information from written information Reads directions and interprets basic computer materials Records requested information on forms
11. Asks for help when information is not clear	Identifies situations in which action should be preceded by getting prior consent or advice from supervisor
12. Makes changes in manuals according to information received in memos	Reads and interprets general vocational vocabulary Utilizes reference materials in manuals Reads and interprets specific information from memos Reads and interprets written instructions from supervisor Changes information according to instructions

CLAIMS REVIEWER

Job Tasks

After claims have been entered onto the system, they are automatically examined by a computer program. This program audits claims to determine if the claims should be paid. This is done overnight. The main task of the Claims Reviewer is to examine audits and determine if the claim should be paid or denied and if there should be modifications in the amount paid. The following are the steps the analyst takes and the basic skills needed to perform the tasks:

JOB TASK	SKILLS NEEDED
1. Receives audits	

2. Examines the audit printout or the audit screen to determine what the audit question is	Reads and interprets vocational vocabulary Identifies abbreviations, symbols, and codes specific to job Reads and interprets forms Utilizes resources to seek information; e.g., manuals Utilizes table of contents, index, and appendices in manuals Reads and interprets specific information from written materials Demonstrates ability to differentiate, sort, and classify information Identifies effective problem-solving strategies such as formulating, evaluating, and choosing options Utilizes note-taking skills for remembering important points

3. Finds information to determine if audit is correct	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to job Reads and interprets forms Utilizes resources to seek information; e.g., manuals Utilizes table of contents, index, and appendices in manuals Reads and interprets specific information from written materials Reads and interprets charts Reads directions and interprets basic computer materials Demonstrates ability to differentiate, sort, and classify information Identifies effective problem-solving strategies such as formulating, evaluating, and choosing options Utilizes note-taking skills for remembering important points

4. If claim must be repriced, determines how to calculate appropriate price	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to job Utilizes resources to seek information; e.g., manuals Utilizes table of contents, index, and appendices in manuals Reads and interprets specific information from written materials Reads and interprets charts Reads directions and interprets basic computer materials Demonstrates ability to differentiate, sort, and classify information Identifies effective problem-solving strategies such as formulating, evaluating, and choosing options Utilizes note-taking skills for remembering important points
5. If prices must be recalculated, calculates new price	Follows mathematical formula Determines mathematical equivalents by converting fractions, percentages, and decimal fractions Perform mathematical operations using a calculator Perform computations using decimal fractions and/or percentages

6. Makes correct entries onto computer system according to decisions made	Reads and interprets vocational vocabulary Utilizes reference materials in manuals Reads directions and interprets basic computer materials Records information on work forms Writes common abbreviations and codes standard to job
7. Asks for help when information is not clear	Identifies situations in which action should be preceded by getting prior consent or advice from supervisor
8. Makes changes in manuals according to information received in memos	Reads and interprets vocational vocabulary Utilizes reference materials in manuals Reads and interprets specific information from memos Reads and interprets written instructions from supervisor Utilizes table of contents, index, and appendices in manuals Reads and interprets charts, graphs, tables, and forms Changes information according to instructions

Integration of Basic Skills Tasks with Job Tasks

MODULE	JOB TASKS	CASAS SKILLS
Module 3 Reading Claim Forms	Reading and finding information from simple medical claims forms Reading and finding information from claims history forms Completing forms with information from another form	Read and interpret general vocational vocabulary Identify abbreviations, symbols, and codes specific to the job Read and interpret charts, graphs, and forms Read directions and interpret basic computer materials; e.g., printouts, software programs Record date, time, and other requested information on work forms, charts, and graphs Write common abbreviations and codes specific to job

Module 4 Clear Writing	Grammar, spelling Choosing most clearly written text Writing clearly	Utilize appropriate mechanics of standard English Write information in clear, logical, and complete manner Write short notes and/or simple memos Write letters using correct structure and sentence style Use computer for simple word processing

Module 5 Using Reference Materials	Given decision to make, finds place to find answer Makes "if...., then" decision according to information found	Read and interpret general vocational vocabulary Read and locate information listed in alphabetical order Utilize reference materials Identify abbreviations and codes specific to job Read and interpret specific information from written materials Utilize table of contents, index, and appendices in textbooks, manuals, and handouts Read and interpret charts, graphs, tables, and forms Demonstrate ability to differentiate, sort, and classify information Identify effective problem-solving strategies

MODULE 2 - Medical Terminology

Mary's Story

Introduction

Mary Moves In

Meeting A New Neighbor

An Emergency

Mary Learns New Word Parts

Mary Starts School

More Familiar Word Parts

Places and Directions

Mary Begins To Learn Body Parts

Mary Knows More Body Parts

Mike Hurts His Neck

Mary Moves

MODULE 3 - Reading Claims Forms

Reading Forms

Scenario for reading form 1 through form 5

Generic instruction for medical forms

Generic instruction for reading forms

Instruction for reading form 1

Instruction for reading form 2

Instruction for reading form 3

Instruction for reading form 4 and form 5

MODULE 4 - Clear Writing

Choosing Better Writing

Scenario for picking the correct writing samples

Instruction for poor grammar

Instruction for correct word usage

Instruction for punctuation

Instruction for run-on sentences

Instruction for capital letters

Instruction for wordy sentences

Instruction for jargon

Instruction for adjectives and adverbs

Instruction for pronouns

Instruction for writing in passive voice

Expressing Yourself in Writing

Scenario for writing memos, letters, etc.

Instruction for writing a draft

Instruction for editing a draft

Instruction for planning what you write

MODULE 5 - Using Manuals

Finding Information

Scenario for finding information

Instruction for employee handbook

Instruction for medical dictionary

Instruction for policy holders

Instruction for diagnoses codes

Policy Manual

Scenario for using policy manual

Instruction for diagnosis code not included

Instruction for emergency surgery

Instruction for insured's address not included

Instruction for insured's name not included

Instruction for introduction to policy manual

Instruction for multiple procedures during one surgery

Instruction for precertification review

Instruction for pre-existing conditions

Instruction for patient name not included

Building Your Vocabulary

Game to help learners build their vocabulary

FIELD TESTING

An important component of curriculum development is field testing the curriculum materials, especially in the development of software. Review of the process of curriculum materials began with the literacy task analyses. Supervisors, trainers, and workers provided feedback on the lists of job tasks and related basic skills. The Institute staff person who conducted the literacy task analyses interviewed the same people who had originally provided the information for the task analyses as well as other who reviewed the products of the literacy task analyses.

As the modules were programmed, they were tested internally at the Institute for operational errors. When a module was finished, it was sent to the Pennsylvania Blue Shield lab. Tri-County OIC, the service provider, was responsible for identifying software "bugs" and other problems that students encountered in using the software. They were given forms to use to provide regular feedback to the Institute developers. (Feedback is very important to the development process because it is impossible to duplicate, within the Institute, all of the machines and environments in which the software will be used.)

An Institute staff person also made frequent visits to Pennsylvania Blue Shield to observe the software being used, talk to students and teachers, and discuss the curriculum materials with technical trainers. Because the literacy instruction is embedded in job tasks, it was important to ensure that the technical contextual material was correct; therefore, Pennsylvania Blue Shield trainers carefully reviewed the software for accuracy. Advisory Board members, consisting of students, other workers, supervisors, trainers, and management, also reviewed the software and provided feedback to the Institute staff.

The teachers from the Tri-County OIC created supplementary print materials that extended the practice of the concepts and skills taught in the software. The print materials also helped fill int he time gap between the literacy task analyses (which were shared with OIC) and the time that the software was ready to be used. (Since software development takes more time than production of print materials, the print gave the teachers something to use with students until the software was ready.) These print materials, which were not part of the projected grant activities, were not designed for distribution.

When feedback was received, Institute staff made the suggested revisions. The software was again checked to ensure that errors were not built into corrections. Revised versions were sent to the Pennsylvania Blue Shield lab for use. If other problems were identified, they were also fixed. To conclude this process, and to ensure consistency of grammar and punctuation, the software modules were given a final quality check. A person who had had not part in the development of the software (and, therefore, could be a naive user) reviewed the software in depth, selecting every answer choice for every question to ensure that the software was error-free and consistent. As a result of this final quality check, further revisions were made. Again, the revised software was sent to Pennsylvania Blue Shield for use. At the time of this writing, at the completion of the funded project, the software and accompanying manuals are being packaged for national distribution by the Institute at cost. Pennsylvania Blue Shield has continued the program, hiring the OIC to deliver classes on site. The same curriculum materials are being used and procedures followed as during the funding period.

An Instructor's Manual describes the JLSP software and provides step-by-step guidance in using it. A Technical Manual describes the hardware specifications and other information necessary to install and run the software on both the Macintosh and IBM/compatible computers.

TEST DEVELOPMENT

As described in the grant proposal, standardized tests are not appropriate in workplace literacy programs. While gains in standardized test scores may indicate transfer of the contextual literacy instruction to academic skill acquisition, standardized tests were used in this project primarily to validate the creation of job-related criterion-referenced assessments that were developed specifically for the JLSP curriculum. Instead of comparing learners to others in a norming group, as standardized tests do, criterion-referenced tests measure an individual's mastery of basic skills. Criterion-referenced tests, therefore, are the most accurate measurement of the impact of basic skills instruction. Because they are specially designed for use in the workplace setting, they are highly relevant to the learners as standardized tests are not.

Using the literacy task analyses which identified the related basic skills, Institute staff developed test items to measure mastery of the most important basic skills. The context for the test items was the same as for instruction, namely, the job tasks of the targeted positions at Pennsylvania Blue Shield. Therefore, once the reliability and validity could be established, the criterion-referenced tests could be used alone as the best assessment of students' learning.

The criterion-referenced test was ready for use with the January 1993 group. The Institute analyzed the resulting data and determined that the test reliability (KR-20 formula) was .985. Validity was determined by correlating the results of the criterion-referenced test with the Tests of Adult Basic Education (TABE) Complete Battery. The correlation was .873 (pretest) and .796 (post-test), indicating that the criterion-referenced test is a valid substitute for a standardized test. In fact, it is more valid than the TABE because its content is relevant to instruction and, therefore, is a better measure of mastery of instruction in basic skills.

EVALUATION INSTRUMENTS

Evaluation Grid for 1992-93
Job Linked Skills Program

TOOL	SOURCES OF EVALUATION INFORMATION
1. Everyday Problems Test	Students in the first two sessions took the Everyday Problems Test. This test was not administered beyond the first two groups as it was determined that extensive screening time requirements were reducing class instruction hours. This data was being captured and designed to determine the impact basic skills training might have on "life skills" knowledge.
2. Criterion Reference Test (CRT)	The Criterion Reference Test (CRT) was designed to determine a student's pre-class knowledge base and post class learning gains. The CRT test was designed by the partners to evaluate individual knowledge and develop an IEP (individual educational plan) for each participant. It was also used to assure the extent to which course objectives were accomplished.
3. TABE Test	The Test of Adult Basic Education (TABE) test was employed to hone in on basic skill needs pre- and post-class. Pre-class results were considered in developing the IEP and post-class results were utilized for development of post-class educational activities via our Learning Centers or NovaNET (educational activities available through the University of Illinois).
4. Student Attitude Surveys	The attitudinal survey was conducted pre- and post-class to measure student expectations and ultimate reactions to course content and its perceived impact on the personal as well as their job related situations.

5. Students Surveying Students	To provide an opportunity for open discussion from students, two former students volunteered to conduct class interviews. These interviews were conducted in a "non-threatening" environment in the absence of teachers and administrators. The student surveyors documented discussions and provided feedback to the Project Director for action. Input was shared with all partners and the Advisory Council and action taken where appropriate.
6. Teacher Survey	The teachers were interviewed by the outside evaluator and the Project Director in separate sessions. Based on input received, action was initiated with students, other teachers, or Blue Shield managers as required.
7. Partners/Advisory Council	The Partners and Advisory Council met monthly to discuss courseware development, classroom activity, student concerns, and Blue Shield management concerns. Evaluation of the project, timelines, deliverables, and program effectiveness were reviewed and adjustments defined to ensure successful completion of this program.

The external evaluator conducted periodic interviews with all class sessions. Visits were routinely made with at least fifty percent or more of all students in each session at the end of the four/fifth and eighth/ninth weeks. Interim reports were provided to the Project Director and subsequently discussed at the Advisory Council/Partners monthly meetings. The summative evaluation is submitted with the report to the U.S. Department of Education.

DISSEMINATION

The Job Linked Skills Program has been and will be introduced to the public through the following vehicles:

Presentations at Meetings/Conferences

April 1993	NovaNET Users Group Conference Tucson, Arizona
May 1993	Texas Workforce Literacy Conference Dallas, Texas
May 1993	Successfest at Pennsylvania Blue Shield Camp Hill, PA
June 1993	Pennsylvania State Coalition for Adult Literacy Harrisburg, PA
July 1993	Williamsport School District Superintendent Williamsport, PA
Sept 1993	U.S.D.O.E. National Workplace Literacy Closeout Conference Washington, DC

Planned 1994

February 1994	Pennsylvania Association for Adult and Continuing Education - Mid-Winter Conference Hershey, PA
May 1994	Call to Action Conference - Mobilizing for Adult Literacy and Learning In Pennsylvania Carlisle, PA
May 1994	Texas Community and Technical College Workforce Education Consortium Dallas, Texas
June 1994	Blue Cross and Blue Shield of Texas, Inc. Richardson, Texas

Periodicals/Newspapers/Mailings

The Patriot News Company

The ADTED PROGRAM TODAY (Adult Education Program Newsletter - Penn State)

CBT Bulletin - Blue Cross/Blue Shield Association

Blue Cross/Blue Shield Association News Bulletin

U.S. Department of Education, Division of Vocational and Adult Education's Newsletter

Clearinghouse on Adult Education and Literacy

ERIC Clearinghouse on Adult, Career and Vocational Education

Curriculum Coordination Centers in Hawaii, Illinois, Mississippi, New Jersey, Oklahoma, and Washington

U.S. Department of Education WORKPLACE NETWORK NEWS

Mosaic - Institute for the Study of Adult Literacy

INSTITUTIONALIZATION

The success of the Job Linked Skills Program can be measured not only in what it has already done for Pennsylvania Blue Shield, but also in what it promises to do for the future. By the close of the grant, 268 employees had successfully completed the ten-week basic skills course; however, over 713 employees have requested the program and more names are added each week.

To meet the demand, Pennsylvania Blue Shield contracted with the Tri-County Opportunities Industrialization Center (OIC) to offer four additional sessions of the Job-Linked Skills Program this year. Sixty-two participants in seven classes attended the October-December session, and sessions for four groups of fifty students each will be offered on the following dates in 1994:

Session One	January 18 - March 30
Session Two	April 11 - June 20
Session Three	July 11 - September 19
Session Four	October 3 - December 8

Part of the success of this program has been the ability and the willingness of those involved to adapt to changing needs and to make improvements. Following the institutionalization of the JLS program, the administrators and instructors have made the following changes:

* All classes are introduced to NovaNET, a distance education program from the University of Illinois, that brings over 10,000 hours of lessons in 150 subject areas to the participants' fingertips. Instructors use NovaNET to individualize instruction in basic skills for the JLSP participants. For example, at one learning station a person may be learning how to compute fractions; another may be learning the rules for commas; and a third person might be moving on to Advanced Algebra.

* Each participant provides a writing sample at the beginning of the course that is holistically analyzed to evaluate his or her strengths and weaknesses in composition. Using this information, the OIC instructors individualize instruction to improve the specific areas of weakness, while at the same time, strengthening areas where the writer already has shown ability.

* A second writing sample, taken at the end of the course, will demonstrate how much the participant's writing has improved.

Besides the institutionalization of the JLSP Program, bringing the program to Pennsylvania Blue Shield has offered employees other benefits as well. These benefits have been demonstrated in the achievements of former participants who have continued to pursue self-improvement.

* Two former participants received their high school diploma in June 1993, and five others should receive theirs in June 1994.

* Since NovaNET use can continue beyond the JLS program, several employees continue to learn using this medium. Pennsylvania Blue Shield strengthened its commitment to these people by purchasing ten notebook computers that can be loaned to former JLSP participants for home study. Additionally, disks that employees can load on their home computers allow them access to NovaNET as well. In each case of home study, Pennsylvania Blue Shield pays for the phone line costs to make this learning available.

* For those employees with little time to work on learning at home, Pennsylvania Blue Shield offers Learning Centers at three sites where employees not only can access NovaNET, but also hundreds of other self-directed learning programs. These include interactive videos, CD Rom players and PC software programs. The Center Street facility (Camp Hill) is available to employees twenty-four hours a day, seven days a week. The other two, one at Derry Street in Harrisburg; and the other in Williamsport, PA; offer time slots until eight o'clock in the evening and on Saturdays. Employees use these Centers before work, after work, and during lunch hours and breaks. Some managers have found learning to have such a positive effect on their employees' work that they even offer Learning Center time as incentives.

EVALUATION

Emory J. Brown

Emory J. Brown is the outside evaluator contracted to evaluate the Job Linked Skills Program during the eighteen-month grant. His summary is an additional attachment to this report.

Mr. David Shively of the SME Group was hired to provide a second evaluation on the Job Linked Skills Program (JLSP). Although his summary of data is fairly consistent with Dr. Brown's analysis, Mr. Shively will continue his efforts in evaluating the program during 1994. He will perform a review, comparison and analysis on a control group of employees and students who participated in the January and April 1993 classes. Information on promotions, productivity, quality, educational activity, and the like will be reviewed. Excerpts from Mr. Shively's report have been included in the "Outcomes" section of this report. His efforts were financed by Pennsylvania Blue Shield.

APPENDIX A

Pennsylvania
Blue Shield

Memorandum

To: Those Listed June 15, 1992

From: D. M. Cheatham
Literacy Programs Director

Subject: Schedule for Planning Committee Meetings

Attached is the schedule for our Workplace Project meetings.

All meetings will be held beginning at 10:00 a.m. in Conference Rooms 439 and 441.

Please let me know if you cannot attend.

Also attached is a revised listing of the Advisory Council.

161a92.dc/dla

To:
D. Anklum
E. Askov
J. Auer
G. Brady
E. Brown
A. Bruno
F. Crumlich
D. Donald
P. Ferguson
L. Gray
R. Holtry
J. Hoover
G. Rickards
A. Thomas
B. White
J. Woodyard

cc:
T. Sommers
D. Rippey
S. Hack

579 K 11/88

PLANNING COMMITTEE MEETINGS

Date	Location
Monday, July 6, 1992	Rooms 439 & 441
Monday, August 10, 1992	Rooms 439 & 441
Monday, September 14, 1992	Rooms 439 & 441
Monday, October 19, 1992	Rooms 439 & 441
Monday, November 9, 1992	Rooms 439 & 441
Monday, December 14, 1992	Rooms 439 & 441

WORKPLACE PROJECT

Advisory Council

Medicare Select Claims Adjudication
- Dwight Anklum
- Fran Crumlich
- Andrew Thomas

Private Business Claims Analysis Day
- Gayle Brady
- Jackie Hoover

New Jersey Medicare Claims Review
- Jeffrey Auer

Private Business Claims Review
- Lori Gray
- Robin Holtry

Medicare Beneficiary/Physician Services (NJ)
- Doris Donald

Customer Service Support
- Arlene Bruno

Employee Relations
- Becky White

ADVISORY COUNCIL MEETING MINUTES

June 8, 1992

The first Planning Committee Meeting for the Workplace federal grant activity was held on Monday, June 8, 1992. Present at this meeting were:

Partners

Donna Cheatham
Gerry Rickards
Dr. Eunice Askov
Jeffrey Woodyard
Priscilla Ferguson
Dr. Emory Brown

Advisory Council Members

Doris Donald
Lori Gray
Robin Holtry
Frances Crumlich
Sueanne Shay (for Arlene Burno)
Andrew Thomas
Dwight Anklam
Jeff Auer
Gayle Grady
Jackie Hoover
Becky White

Special Guests

Thomas C. Sommers, Sr. Vice President, Human Resources
David R. Rippey, Director, Training and Development
Sondra Hack, Coordinator, Learning Center

The meeting opened with remarks from Tom Sommers welcoming the Advisory Council Members and providing insight on the project and our goals/directions.

Sandy Hack provided an overview of the planned activity to have the Learning Center operational by the end of June. The Learning Center will also be the home of our workplace skills training.

The role of the Partners and Advisory Council Members was explained to all attendees. Handouts conveying the same data were all provided.

The project objective and course content were explained to participants and provided in a handout.

Project tasks, personnel accountability and a timeline of due dates were provided to the partners for review and comment.

A LEGACY OF CARING
AGENDA · JULY 6, 1992

REVISED COMMITTEE MEETING SHCEDULE

All meetings are on Monday, in Rooms 439 & 441.

August 10,1992
September 21,1992
October 19,1992
November 9,1992
December 7,1992

LEARNING CENTER

Opened June 29,1992.
Employees may use the center now.

PROJECT STATUS

First class will start on August 3,1992.
20 employees will participate.
Software packages are being reviewed for class use.
Penn State has completed the job analysis off all areas except Med Review and PB Customer Service.
Contract negotiations are underway for all partners.
Task Analysis for the Claims Examiner aspect of processing was completed and comments provided to Penn State. Software development is underway at Penn State.

PARTNER COMMENTS

Dr. Askov
Mr. Woodyard
Mr. Rickards

ADVISORY MEMBERS COMMENTS

CURRENT TASKS REQUIRING IMMEDIATE ATTENTION

Conduct job analysis	6/30/92
Identify testing instruments	7/1/92
Develop feedback forms	7/31/92
Negotiate subcontracts	7/31/92
Begin department meetings	7/15/92
Develop recruitment strategies	7/15/92
Review commercial software	7/24/92
Customize software	7/28/92
Train teachers	7/27/92
CLASS BEGINS	**8/03/92**
Develop promotional flyers	8/10/92
Report Project Time	7/13/92
NAME THE PROJECT	7/22/92

WELCOME... Angie Steck...returning from maternity leave. Angie will record all meeting minutes and perform other administrative tasks as necessary.

BREAK INTO GROUPS PARTNERS AND ADVISORY COUNCIL

ADVISORY COUNCIL MEETING MINUTES

July 6, 1992

Attendance:

Partners - Nicki Askov
Emory Brown
Donna Cheatham
Priscilla Ferguson
Gerry Rickards
Jeff Woodyard

Advisory Council - Dwight Anklum
Gayle Brady
Fran Crumlich
Lori Gray
Robin Holtry
Jackie Hoover
Andrew Thomas
Becky White

Substitutes - Sueanne Shay
Larry Jordan

Guests - Dave Rippey
Jeff Small

Meeting began with a welcome from Donna Cheatham. Donna then reviewed the agenda and asked each partner to inform the council on the status of their activity.

Nickie - Need scenarios of participants job tasks; informed council that they are important to the project, and without each individual it would not work.

Jeff - Working with Bernie Sheaffer on software for the project, identifying specific things for software this week using every day problem solving (functional kinds of tasks, handling graphs, etc.), attitude survey, criteria test, and TABE (TABE survey form was circulated).

Gerry - Courseware of other organizations - waiting for information from U.S. Department of Education in order to work on budget.

Donna is only interested in group data not necessarily individual, information to be gathered will be more group specific; tests and scores are CONFIDENTIAL.

The advisory council and the partners need to start a time line on EVERYTHING being done on the project. Gerry Rickards is developing a form to keep track of time, everyone will get a copy. Supervisors and managers need to keep track of their time.

Dave Rippey raised a question, "How do we know people that are in the program really need it?" Donna said she will not tell anyone that they can't take it, it is on a voluntary basis. She can't ensure that people needing the course will get it. She will also request managers and supervisors to identify any staff who might be in need of this course and have not, as yet, volunteered.

Emory - Working on attitude survey questions; will review with the partners; questions will go through appropriate channels before test is finalized.

First group is focus group; will not be greatly concerned with tests. This group must have a good attitude and be positive!!

All council members need an alternate if you cannot attend the meetings; let Donna know who your alternates are.

Donna then assigned the advisory council to do the following before the end of the meeting:

1. Name the project - Cannot use ALIVE - come up with something that communicates the objects of the project (3 options)
2. Recruitment strategies - Come up with list to give to Donna for November class, but something to go by for the August class

PROMOTIONAL IDEAS

- Memos
- Posters
- Word-of-mouth
- Bulletin Board
- Easel
- Symon
- Check Stuffers
- Departmental sub-division meetings
- COVERAGE magazine

SUGGESTIONS FOR THE NAME OF THE PROJECT

S kills
T raining
E nhancement
P rogram

S kills
I mprovement
P rogram

E nhancing
Y our
F uture with
B lue
S hield

**** J ob
L inked
S kills
P rogram

PARTNER MEETING MINUTES

July 6, 1992

* Negativity could cause the project to end; when you have volunteers for the program, there shouldn't be any negativity

* Will be working with four divisions; we want to "train up" or at the same level they work at now

* A letter needs to be written with all the changes to US Department of Education (Nickie will work on her changes this week)

* As of now, classes are not planned for the off shifts

* There is a need to refresh the employee's memories regarding classes

* Reimbursement is done by either percentages or cost reimbursement (quarterly or monthly reports)

* Attitude survey questions were reviewed (see attached)

  - do we want codes or names
  - a signed consent form will be given to each participant

PENNSYLVANIA BLUE SHIELD LEGACY OF CARING

ATTITUDES OF ADULT STUDENTS

1. How do you feel about taking the Job Linked Skills Development program?

____ very good

____ good

____ ok

____ not so good

____ bad

2. How do you feel about attending this class for training?

____ very good

____ good

____ ok

____ not so good

____ bad

3. How do you feel about using the computer for learning?

____ very good

____ good

____ ok

____ not so good

____ bad

4. How do your fellow workers feel about your taking this training?

____ very good

____ good

____ ok

____ not so good

____ bad

5. How do your family members feel about your taking this training?

____ very good

____ good

____ ok

____ not so good

____ bad

6. How do you usually feel about yourself as a worker (on-the-job)?

____ very good

____ good

____ ok

____ not so good

____ bad

7. What do you think your chances are of getting a better job within Pennsylvania Blue Shield and externally in the next few years?

____ very good

____ good

____ ok

____ not so good

____ bad

8. How will this training improve your job performance?

____ very good

____ good

____ ok

____ not so good

____ bad

9. How satisfied are you with working at Pennsylvania Blue Shield?

____ very good

____ good

____ ok

____ not so good

____ bad

10. What do you want to get out of this training? Check all that apply.

____ learn to read better

____ learn to write better

____ learn math better

____ improve job performance

____ get a better job

____ problem solving

____ personal satisfaction

11. Which of the following are difficult for you?

____ reading

____ writing

____ math

____ using the computer

____ learning new skills

____ problem solving

12. How do you feel about change?

____ very good

____ good

____ ok

____ not so good

____ bad

13. How many post-high school classes have you taken?

14. How many internal and external classes have you taken?

15. Job classification --

16. Years with Pennsylvania Blue Shield --

Pennsylvania
Blue Shield

Memorandum

TO: Those Listed July 14, 1992

FROM: D. M. Cheatham, Director
Literacy Programs

SUBJECT: Blue Shield Report

The attached document was distributed at our committee meeting held on July 6, 1992. All advisory council members have a copy. The attached is basically for your information to let you know how things are proceeding.

Please let me know if you have any questions. I can be reached at extension 8859.

196c92.dc/ajs

Attachment

To: J. Auer
A. Bruno
D. Donald
D. Early
S. McCarver
C. Rudnick
K. Siburt

BLUE SHIELD REPORT -7/2/92

I. **Tasks completed**

  A. Tasks analysis on two jobs (Claims Examiner--Blue Shield and Claims Analyst--Private business)

  B. Identification of appropriate computer programs

  C. List of computer programs sent to OIC

II. **Tasks now being completed**

  A. Visit to Camp Hill for task analysis of other jobs (July 8-9)

  B. Last task analyses

  C. Computer assisted instruction to teach medical terminology now being completed

III. **Tasks to be started shortly**

  A. Meeting with OIC concerning customizing computer programs

  B. Identification of vocational vocabulary

  C. Beginning design of other CAI

JOB 1 - CLAIMS EXAMINER (MEDICARE)

Job Tasks

The main task of the claims Examiner (Medicare) is to enter claim information onto the computer system. The following are the steps the analyst takes and the basic skills needed to perform the tasks:

JOB TASK	SKILLS NEEDED
1. Receives claims from clerk	
2. Finds appropriate information on claim to enter into computer. Note: In Medicare, almost all claims forms are the same; there are only a few unusual forms, so most times the information is found in the same section of the claim.	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to job Reads and interprets forms
3. Enters information onto computer	Reads and interprets general vocational vocabulary Identifies abbreviations and symbols specific to job Reads directions and interprets basic computer materials.
4. Checks to see if procedure is appropriate for the diagnosis To do this, analyst uses manuals. Find the procedure listed. These are found in manuals according to the type of procedure it is. The manuals are tabbed and organized systematically. If the procedure is not appropriate for the diagnosis, claim is refused.	Reads and interpretS vocational vocabulary Utilizes reference materials in manuals Reads and locates information listed in alphabetical order Utilizes table of contents, index, and appendices in manuals. Reads and interprets charts and tables Demonstrates ability to sort, classify and differentiate information

5. If information concerning patient or provider is not complete, uses computer program to find the complete information	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to the job Read directions and interprets computer instructions
6. Checks for error messages and acts on them.	Reads and interpret vocational vocabulary Utilizes reference materials in manuals Reads directions and interprets basic computer materials
7. Sends incomplete forms to appropriate department	Reads and interprets vocational vocabulary Reads and interprets forms Identifies situations in which action should be preceded by getting prior consent or advice from supervisor
8. Asks for help when information not clear	Identifies situations in which action should be preceded by getting prior consent or advice from supervisor

9. Makes changes in manuals according to information received in memos.	Reads and interprets general vocational vocabulary Utilizes reference materials in manuals. Reads and interprets specific information from memos Reads and interprets written instructions from supervisor Utilizes table of contents, index, and appendices in manuals Reads and interprets charts, graphs, tables and forms Changes information according to instructions

JOB 2 -- CLAIMS ANALYST (PRIVATE BUSINESS)

Job Tasks

The main task of the claims analyst (Private Business) is to enter claim information onto the computer system. The following are the steps the analyst takes:

JOB TASKS	SKILLS NEEDED
1. Receives claim from clerk	
2. Finds appropriate information on claim to enter into the computer	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to job Reads and interprets forms
3. Enters information onto computer	Reads and interprets general vocational vocabulary Identifies abbreviations and symbols specific to job Reads directions and interprets basic computer materials
4. If information concerning patient or provider is not complete, uses computer program to find the complete information	Reads and interprets vocational vocabulary Identifies abbreviations and symbols specific to the job Reads directions and interprets computer instructions

5. Reads accompanying documentation to gather information	Reads and interprets vocational vocabulary Identifies symbols and abbreviations specific to the job Reads and interprets forms Reads and interprets specific information from written materials Utilizes reference materials in manuals
6. Reads medical notes including surgical notes to gather information to enter into computer.	Reads and interprets general vocational vocabulary Reads and interprets specific information from written materials Identifies abbreviations and symbols specific to the job Reads and interprets tables, graphs, charts, and forms
7. Checks for error messages (suspensions) and acts on them	Reads and interpret vocational vocabulary Utilizes reference materials in manuals Reads directions and interprets basic computer materials
8. Sends incomplete forms to appropriate department	Reads and interprets vocational vocabulary Reads and interprets forms Identifies situations in which action should be preceded by getting prior consent or advice from supervisor
9. Asks for help when information not clear	Identifies situations in which action should be preceded by getting prior consent or advice from supervisor

10. Makes changes in manuals according to information received in memos	Reads and interprets general vocational vocabulary Utilizes reference materials in manuals. Reads and interprets specific information from memos Reads and interprets written instructions from supervisor Utilizes table of contents, index, and appendices in manuals Reads and interprets charts, graphs, tables and forms Changes information according to instructions

BLUE SHIELD REPORT -7/2/92

I. Tasks completed

- A. Tasks analysis on two jobs (Claims Examiner--Blue Shield and Claims Analyst--Private business)
- B. Identification of appropriate computer programs
- C. List of computer programs sent to OIC

II. Tasks now being completed

- A. Visit to Camp Hill for task analysis of other jobs (July 8-9)
- B. Last task analyses
- C. Computer assisted instruction to teach medical terminology now being completed

III. Tasks to be started shortly

- A. Meeting with OIC concerning customizing computer programs
- B. Identification of vocational vocabulary
- C. Beginning design of other CAI

Pennsylvania
Blue Shield

Memorandum

To: Those Listed

July 10, 1992

From: G. F. Rickards, Director
Keystone Training Center

Subject: Time Recording

As a member of the Job Linked Skills Program's advisory council, it is important that we keep an account of the time you and other department staff spend working on the project.

Please make copies of the attached time log and use to record all time spent on the project during each month. Be sure to include hours for **all** persons involved with the project; e.g., people reviewing documents, manager's time, supervisor's time, etc. This log should be forwarded to Angela Steck, Training and Development, Building 1A, Level 1 the first week of each new month.

If you have any questions, please call me at 561-0210.

Thank you.

192a92.gr/ajs

Attachment

To: D. Anklum
J. Auer
G. Brady
A. Bruno
F. Crumlich
D. Donald
L. Gray
R. Holtry
J. Hoover
A. Thomas
B. White

cc: D. Cheatham
D. Rippey

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PENNSYLVANIA BLUE SHIELD

Monthly task log

Employee________________ Period covering______to______.

Monday__	Tuesday__	Wednesday__	Thursday__	Friday__	WEEKLY TOTAL
					hrs
Monday__	Tuesday__	Wednesday__	Thursday__	Friday__	WEEKLY TOTAL
					hrs
Monday__	Tuesday__	Wednesday__	Thursday__	Friday__	WEEKLY TOTAL
					hrs
Monday__	Tuesday__	Wednesday__	Thursday__	Friday__	WEEKLY TOTAL
					hrs
Monday__	Tuesday__	Wednesday__	Thursday__	Friday__	WEEKLY TOTAL
					hrs
					MONTH TOTAL
					hrs

TASK CODE;
1= Attend meeting
2= Project work

Approval______________________Date________

Title____________________________

Pennsylvania
Blue Shield

Memorandum

To: D. A. Early
S. A. McCarver
C. C. Rudnick

June 18, 1992

From: D. M. Cheatham
Literacy Program Director

Subject: Workplace Grant

As a part of the development process for our job-linked skills development program, Penn State has provided this brief synopsis of what occurs in the claims examiner process (Medicare and Private Business - referred to as Blue Shield). Bernie Shaeffer who has been reviewing the various functions with your staff, has identified her understanding of the job tasks and basic skills needed to perform these tasks.

Please have your advisory council representative, a trainer, supervisor, and any others you deem appropriate, review and comment on this outline. Your comments are needed by next Wednesday (in writing please). Since I will be out next week, please send your comments to Gerry Rickards, he will provide them to Bernie.

I apologize for the tight timeframe, but as soon as Bernie has our comments, they can begin actual software development.

Thank you for your assistance.

170a92.dc/dla

cc: D. R. Rippey
G. F. Rickards
Advisory Council Members

JOB 1 - CLAIMS ANALYST (MEDICARE)

Job Tasks

The main task of the claims analyst (Medicare) is to enter claims information onto the computer system. The following are the steps the analyst takes:

1. Receives claims from the clerk.
2. Finds appropriate information on claim to enter into computer.
   Note: In Medicare, almost all claims forms are the same; there are only a few unusual forms, so most times the information is found in the same section of the claim.
3. Checks to see if procedure is appropriate for the diagnosis. To do this, analyst uses manuals. Find the procedure listed. These are found in manuals according to the type of procedure it is. The manuals are tabbed and organized systematically. If the procedure is not appropriate for the diagnosis, claim is refused.
4. If information concerning patient or provider[1] is not complete, analyst uses computer program to find the complete information. All providers have numbers and these are entered into the computer; if the name of the provider is found, but not the number the provider name is entered (John Doe, MD).
5. Checks for error messages and acts on them.
6. Sends incomplete forms to appropriate department.
7. Asks for help when information is not clear.
8. Makes changes in manuals according to information received in memos.

At first, all work is checked by a Quality Control Supervisor. Errors are reported back to analyst. The analyst can answer errors in a written memo. After a certain period of time, a sample of work is checked. Analysts must complete 69 Medicare claims per hour.

[1] Provider refers to physician or caretaker

Analysts specialize in one type of claim. For example, some analysts have claims from podiatrists, others from chiropractors, etc.

Basic Skills

I. Reading

- A. Read and interpret vocational vocabulary
    1. medical terminology
    2. general insurance terms
    3. vocabulary specific to medical claims forms
    4. abbreviations
    5. acronyms

- B. Read and interpret medical claims forms (Medicare)[2]
    1. finding specific information on forms
    2. scanning for information

- C. Read and interpret manuals
    1. locating information
        - a. using tables of contents
        - b. using tabs
        - c. finding information in alphabetical lists
        - d. finding information in numerical lists
        - e. finding information according to body systems
    2. read and interpret specific information from manuals

- D. Memos
    1. read and interpret information in general personnel memos
    2. read and act on manual change memos
        - a. find pertinent information in manual
        - b. make changes according to memo

II. Using numbers

- A. Scan information to find particular number

- B. Match numbers

---

[2] Most times Medicare claims examiners will work with one specific form.

C. Decimal placement

III. Proofreading

A. Matching numbers on forms with numbers on computer

B. Reacting to error messages

IV. Writing

A. Writing memos to superiors

V. Decision making -- thinking skills

A. Deciding when information on claims form is insufficient

B. Deciding if procedure is appropriate for diagnosis
   1. find procedure in manual
   2. see if diagnosis is listed under the procedure

C. Deciding when to ask for help from technical assistant

PRIVATE

JOB 2 -- CLAIMS ANALYST (BLUE SHIELD)

Job Tasks

The main task of the claims analyst (Blue Shield) is to enter claim information onto the computer system. The following are the steps the analyst takes:

1. Receives claims from clerk.
2. Finds appropriate information on claim to enter into computer.
   Note: With Blue Shield, there are different types of claims forms. Analyst must find information in different parts of the forms.
3. If information concerning patient or provider is not complete, analyst uses computer program to find the complete information. All subscribers and providers have numbers and these are entered into the computer; if the name of the subscriber or provider is found, but not the number the provider name is entered (John Doe, MD).
4. Reads accompanying documentation to gather information.
5. Reads medical notes including surgical/pathology notes to gather information to enter into computer.
6. Checks for error messages (called suspensions) and acts on them. This often involves using manuals to look up the suspension code, determine what the problem is, and acts on it.
7. Makes every effort to completely enter the form from the information given.
8. If it impossible to enter information, sends incomplete forms to appropriate department.
9. Asks for help when information is not clear.
10. Makes changes in manuals according to information received in memos.

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At first, all work is checked by a Quality Control Supervisor. Errors are reported back to analyst. The analyst can answer errors in a written memo. After a certain period of time, a sample of work is checked. Analysts must complete anywhere from 11 to 20 Blue Shield claims per hour depending on the type of claim it is.

Analysts do not specialize in one type of claim.

Analysts make every effort to enter the claim without sending it to another department, even if it means doing some detective work. (This is not true in Medicare)

Basic Skills

I. Reading

  A. Read and interpret vocational vocabulary
    1. medical terminology
    2. general insurance terms
    3. vocabulary specific to medical claims forms
    4. abbreviations
    5. acronyms

  B. Read and interpret medical claims forms
    1. finding specific information on forms
    2. scanning for information
    3. finding information on different forms

  C. Read and interpret manuals
    1. locating information
      a. using tables of contents
      b. using tabs
      c. finding information in alphabetical lists
      d. finding information in numerical lists
      e. finding information according to body systems
    2. read and interpret specific information from manuals

  D. Memos
    1. read and interpret information in general personnel memos
    2. read and act on manual change memos
      a. find pertinent information in manual
      b. make changes according to memo

E. Read attachments

F. Read medical notes

II. Using numbers

A. Scan information to find particular number

B. Match numbers

C. Decimal placement

III. Proofreading

A. Matching numbers on forms with numbers on computer

B. Reacting to suspensions
   a. finding suspensions in manuals
   b. proceeding according to directions (often an "If, then" situation

IV. Writing

A. Writing memos to superiors

V. Decision making -- thinking skills

A. Finding answers in existing materials

B. Deciding when information on claims form is insufficient

C. Deciding when to ask for help from technical assistant

ADVISORY COUNCIL MEETING AGENDA

August 10, 1992

Meeting Minutes	A. J. Steck
Learning Center Update	D. M. Cheatham
Timeline Task List	D. M. Cheatham
Classroom Activities	J. Woodyard
Scenario Development	N. Askov
Contract Negotiations	G. Rickards
Time Logs	A. J. Steck
Feedback Form Review	
Bulletin Board Article	
Check Stuffer	
Open Discussion	

JOB LINKED SKILLS PROGRAM
STATUS UPDATE
AUGUST 10,1992

The current status of the Job Linked Skills (JLS) Program is as follows:

Timeline tasks completed since July 6,1992 are:

- Identify test instruments	Completed	7/01/92
- Conduct job analysis	Completed	7/09/92
- Name the project (JLS)	Completed	7/20/92
- Review commercial software	Completed	7/24/92
- Train teachers	Completed	7/27/92
- Customize software	Completed	7/28/92
- Begin first class	Started	8/04/92
- 20 employees (30 actual)	Completed	8/04/92
- Administer standardized tests	Started	8/04/92
- Maintain all class stats	Started	8/04/92
- Begin teacher assisted training	Started	8/04/92
- Review and revise software	Started	8/04/92
- Begin department meetings	Started	7/15/92
- Develop recruitment strategies	Started	7/15/92

Timeline tasks started but not yet finalized:

- Develop feedback forms	Completed	7/31/92 *
- Negotiate contracts	Due	7/31/92 **

Timeline tasks due in August 1992:

- Develop promotional flyers	Due	8/10/92

* Committee input needed prior to use. **Should be completed in the very near future.

A feedback form has been developed for use in determining the impact the JLS Program has on individual job performance (attached). An attitudinal form has also been developed for use by our evaluator to determine if/how attitudes change from the beginning of the program to the end of the program.

Department meetings began on July 27. We have presented the program to five different departments thus far, B.Boak, D.Delbaugh, J.Miller, J.Walmer, and S.McCarver. An extremely positive response has been received from all manager and supervisory staff. All managers have indicated their gratitude for this program and some have offered to allow their staff to comeback for additional training as additional modules are added to the program. The support, has been overwhelming!!!!!!

We will pursue a check stuffer and bulletin boards as mechanisms to recruit additional employees. The managers believe that once some of their employees complete the course, we will begin to see many more volunteers.

A meeting was held with Terry Bowling, GBU VP, on July 23, regarding the JLS Program and the commitment we're requesting from each division over the next 15 months. The commitment requested from the four division; Private Business Operations, Customer Service, GBU Operations, and GBU Post Pay- Bene/Physician Services is twelve (12) employees from each area. I will meet with Margaret Lanshe and Gino Francavilla to present the same information to these areas. I have already received approval from both VP's to work with their managers on my needs and what each area is able to do at this time.

We have identified thirty (30) employees for the 8/04/92 class. One employee (a volunteer) dropped from the program on 7/28/92 since she will be relocating to another state on 8/23/92.

donna cheatham
8/10/92

ADVISORY COUNCIL MEETING MINUTES

August 10, 1992

Attendance: Partners: Nickie Askov
Emory Brown
Donna Cheatham
Priscilla Ferguson
Gerry Rickards
Jeff Woodyard

Advisory Council: Dwight Anklum
Sharon Arlotle for Jackie Hoover
Jeff Auer
Gayle Brady
Arlene Burno
Frances Crumlich
Lori Gray
Robin Holtry
Andrew Thomas
Becky White

The next meeting will be held on September 21, 1992.

Donna's title has been changed to Continuing Education Director.

The advisory council discussed the timeline and what has been completed since our last meeting.

Feedback reports will be given to Donna:
- students on instructors
- instructors on students
  - (feedback on instructors thus far has have been very positive)

Donna has requested each Vice President of Medicare and Private Business to send 12 people from their areas = 48 employees to future classes.

The tentative class schedule is as follows:

November 2, 1992 - January 15, 1993 (might be changed because OIC has two weeks vacation at Christmas)

February 8, 1993 - April 20, 1993

May 3, 1993 - July 14, 1993

July 26, 1993 - October 2, 1993

Classes will have 10 employees each = 60 per session; classes are 2 hours a day, twice a week, for 10 weeks

Jeffrey - Classroom Activities

First class began on August 4, 1992. Each participant completed an attitude survey, participant contract (consent to participate), application for OIC, Every Day Problems Test, and the TABE test. Currently OIC is trying to match job tasks and what areas need to be developed. The Individual Education Plan (IEP) is an ongoing process; instructors will be talking with individuals one-on-one. There have not been any problems with the students.

Nickie - Scenario Development

Bernie is developing scenarios each job task with reading, writing, math, and problem solving. She is also developing simulations of job tasks as if someone is actually doing their job. This process is gradual. This enhances skills within your job functions. Nickie does not know where the scenario developments stand at this point. Nickie will get back to Donna.

Gerry - Contract Negotiations

All contracts have been signed and sent on July 31, 1992. As soon as we receive invoices, they will be sent. Reports will be generated and mailed today from our financial people.

Donna - Feedback Form Review

Something Strange Is Going On...

* each participant will get this to complete if anything is wrong with the program - problems, errors

* relates to system problems only; anything else goes to the instructor or to Donna directly

* be specific

* 1/2 sheet form

* one problem per sheet

Gerry is going to check whether or not we can get a printer in the Learning Center.

Donna - Bulletin Board Article/Check Stuffer

Suggestions:

* explain class and what it's about

* individual stories on bulletin board/COVERAGE

* group picture

Incentives:

- * mugs
- * certificates - option to include in personnel file
- * dinner for participants
- * sweatshirts, hats

Participants are aware that an evaluation form is being completed in reference to current job performance - all participants signed the form in class.

Class is NOT designed for people with disciplinary problems, nor to save jobs, etc. There is no guarantee that they will be better at their job at the end of the program, basic skills are expected to improve, and thereby potentially net improved performance.

Donna will work with Gerry on bulletin board article.

Angela will send e-mail messages as a reminder for the next meeting.

Meeting adjourned at 12:15 p.m.

WORKPLACE LITERACY GRANT 1992

Task	MAY 1992	JUNE 1992	JULY 1992	AUG 1992	SEPT 1992	OCT 1992	NOV 1992	DEC 1992	JAN 1993	ONGOING
1. Submit proposal to U.S.D.O.E.	Completed 7/17/91									
2. Respond to U.S.D.O.E. Questions/Concerns	Completed 4/29/92									
3. Project Development	5/1									4/30
4. Negotiate subcontracts between PBS, ISAL, and OIC	5/1			7/31 Completed 7/31/92						
5. Develop feedback forms	5/12			7/31 Completed 7/31/92 - One new form completed 8/10/92						
6. Meet with employees, managers human resource personnel regarding project	5/12									Ongoing
7. Develop evaluation instruments	5/12						11/2			
8. Determine course content	5/13		7/1 Completed 6/12/92							
9. Conduct Job Analysis	5/18	6/30	Completed 7/9/92							
10. Formative evaluation of curriculum materials and procedures (ongoing)	5/19									Ongoing

WORKPLACE LITERACY GRANT 1992 (Cont'd)

Task	MAY 1992	JUNE 1992	JULY 1992	AUG 1992	SEPT 1992	OCT 1992	NOV 1992	DEC 1992	JAN 1993	ONGOING
		Phase I		Scenario I				Scenario II		Scenario
11. Software Development	5/20		7/31	8/20		10/15	11/2		1/29	2/1-4/
12. Class Schedule				8/4		10/8	11/2		1/15	
13. Identify Advisory Council Members	6/1	Completed 6/8/92								
14. Develop recruitment strategies	6/1		7/15			10/15				3/15/93
15. Identify focus groups for recruitment input	6/1		7/31	Completed 6/8/92						
16. Develop promotional brochures/flyers	6/1									Ongoing
17. Prepare Monthly Status Report From Advisory Council		6/15				DUE EACH MONTH				Ongoing
18. Identify testing instruments and the time allotments needed		6/16 7/1	Completed 7/1/92							
19. Review commercial software for inclusion in program			7/1 7/24	Completed 7/24/92						
20. Teachers customize commercial software			7/1 7/28	Completed 7/28/92						
21. Train teachers in 1-day workshop for pilot assessment			7/27	Completed 7/27/92						

WORKPLACE LITERACY GRANT 1992 (Cont'd)

Task	MAY 1992	JUNE 1992	JULY 1992	AUG 1992	SEPT 1992	OCT 1992	NOV 1992	DEC 1992	JAN 1993	ONGOING
22. Revise program and curriculum based on pilot				8/1						Ongoing
23. Review/Revise Software				8/3						Ongoing
24. Select and assess program focus groups (n=20) and begin instructions (8-9 wk. session)				8/3						Ongoing
25. Administer Standardized and attitudinal tests				8/3						Ongoing
26. Ongoing teacher training and technical assistance				8/3						Ongoing
27. Maintain class attendance data and communicate problems to project director				8/3						Ongoing
28. Ensure a minimum of 200 employees complete the program				8/3 30 employees						10/31/9
29. Develop job-related screening and criterion-referenced assessments						10/1				Ongoing
30. Develop instructors' manual						10/15				
31. Field Test Criterion Reference Tests							11/1 11/30			
32. Project Maintenance							11/1			10/9

WORKPLACE LITERACY GRANT 1992 (Cont'd)

Task	MAY 1992	JUNE 1992	JULY 1992	AUG 1992	SEPT 1992	OCT 1992	NOV 1992	DEC 1992	JAN 1993	ONGOING
33. Course Implementation						10/19	11/2		2/1/93	5/1
34. Conduct summative evaluation							11/2			9/93
35. Train teachers in 1-day workshop							11/2			
36. Implement program with larger numbers of employees (n-50/cycle) (8-9 wk. session)						10/19	11/2			Ongoing
37. Revise Course as Needed							11/9			Ongoing
38. Evaluate need for no cost extensions										8/2/93
39. Submit Final Report to U.S.D.O.E.										11/30/9

ERS 1251

TABLE 1

DESCRIPTION OF ITEMS IN EPT SCALES

Item Pair #	Description
	Meal Preparation Scale
1,2	Chart: Nutritional Information for Cereal*
15,16	Directions: Safe Turkey Thawing Instructions*
29,30	Chart: Guide to Microwave-safe Cookware*
43,44	Forms: Recipe Book Order Form
57,58	Forms: Fruit Basket Gift Order Form
71,72	Directions: Stuffing Mix Cooking Instructions
	Health (Medications) Scale
3,4	Directions: Use of Cough Medicine*
15,16	Directions: How to Use an Elastic Bandage*
31,32	Form: Patient Medical History*
45,46	Chart: Energy Expenditure of a Healthy Adult
59,60	Chart: Desireable Body Weight Ranges for Men & Women
73,74	Form: Patient Information Request Form
	Phone Scale
5,6	Form: Telephone Service Application*
19,20	Directions: Telephone Calling-Card Instructions*
33,34	Directions: Pay Phone Instructions*
47,48	Form: Telephone Calling Card Application
61,62	Chart: Telephone Discounted Time Period
75,76	Chart: Itemized Long Distance Telephone Bill
	Consumer (Shopping) Scale
7,8	Form: NRP Membership Application*
21,22	Chart: Comparison of Cereal Brands*
35,36	Directions: Catalog Mail-order Information*
49,50	Form: Credit Card Application
63,64	Directions: Mail a Rebate with Proof of Purchase
77,78	Chart: Mail in Rebate for Ladies Underwear
	Financial Management Scale
9,10	Chart: Medicare Benefits Payment Schedule*
23,24	Form: Property Tax or Rent Rebate*
37,38	Form: Information about Prescription Drug Costs*
51,52	Directions: How to Apply for Food Stamps
65,66	Form: Tax Returns for Income and Net Profits
79,80	Chart: Medical Assistance Card Plans

Table 1 cont'd

Household Scale

11,12	Directions: Stain Removal*
25,26	Form: Order Blank for Sweeper Accessories*
39,40	Chart: Washing Machine Trouble Shooting List*
53,54	Chart: Choosing Furniture Polishing Products
67,68	Form: Warranty Registration Card for Vacuum Cleaner
81,82	Directions: Operating Hand Held Vaccum Cleaner

Transportation Scale

13,14	Chart: Taxi Rates*
27,28	Directions: Procedure if Involved in an Accident*
41,42	Form: Regular/Intermittent Car Service Check List*
55,56	Directions: Driver's Right of Way Laws
69,70	Chart: When to Service Your Car
83,84	Form: Travel Survey

* Items on 42-item test version

Pennsylvania
Blue Shield

Memorandum

TO: D. R. Rippey
Training and Development

October 19, 1992

FROM: D. M. Cheatham
Training and Development

SUBJECT: Job Linked Skills Program (JLSP) Status Report

The following is a brief synopsis of the JLSP activity:

* There are six two-hour sessions scheduled in Center Street beginning October 19, 1992:

Monday and Wednesday - 8:30, 10:45, 1:30
Tuesday and Thursday - 8:30, 10:45, 1:30

* There are two four-hour sessions scheduled beginning October 21, 1992:

Wednesday - East Park Drive 8:00 a.m. - Noon
Wednesday Night - Center Street 5:00 - 9:00

* The class curriculum will cover the following:

Medical Terminology (computer-based)
Word Parts
Grammar and punctuation
Reading claim forms (computer-based)

* There are seventy-one (71) employees participating in the class.

* Attendees have been pre-screened via the TABE test. Test results were utilized to place employees in class with employees with similar development needs.

Based on the TABE results, we've identified the following educational skill levels.

Grade 11-12: 39%
Grade 9-10 : 11%
Grade 7-8 : 8%
Grade 5-6 : 13%
Grade 3-4 : 16%
Grade 1-2 : 12%

Sixty-one percent (61%) of the students in the class are functioning at or below a tenth grade skill level.

The staff for these classes are from the following departments:

Private Business	
Operations	33
Customer Service	8
TOTAL	41
Government Business	
Operations	16
Provider/Provider Services	8
Post Payment Review	3
MSS&D	1
TOTAL	28
Corporate	
Pat Hykes	1
Peg Brown	1
TOTAL	2
GRAND TOTAL	71

August 4, 1992 Classes

The August 4 classes concluded on October 8, 1992. The class began with 30 participants and ended 29 employees completing the course. One employee withdrew as she could not see the value of the course since she does not aspire to move up the "corporate" ladder.

Statistical data on the performance of the August 4 classes is being tabulated. I will provide you with results by early next week.

The Future

As a result of the JLSP classes, we will be looking closely at the educational needs of our employees as they finish each class. It is hoped that the novaNET system will provide the educational materials needed to continue assisting our employees in their skill development. It may be necessary to pursue additional education for some of our employees during working hours provided their management would support such an initiative. Some corporate managers have indicated their desire for us to continue this educational process as they believe both they and their employees are benefiting from it.

Staff educational needs will determine to a great degree our future direction. Consideration of the Job Partnership Training Act (JPTA) and additional state and federal grants is imminent. Our long term plan, as it relates to continuing education, will need to be in place in the very near future to ensure an organized and structured approach to the entire continuing education process.

293c92.dc/ajs

Dave / Donna

I'm very interested to see if my change was made following the 1st group in the areas of comprehension. What was the reaction of the group & what will be the follow up with them to keep the initiative moving forward? The second group has a wide span sufficient to provide a good check point of our efforts when they are finished. Does our resident advisor, Emory Brown, have my comments regarding progress being made?

Tom

ADVISORY COUNCIL MEETING AGENDA

September 21, 1992

Meeting Minutes	A. Steck
Learning Center Move	D. Cheatham
Job Linked Skills Program Center	Cheatham/Rickards
Classroom Activities	J. Woodyard
Scenario Development Update	N. Askov
Contract Negotiations	G. Rickards
Time Logs	G. Rickards/A. Steck
Logo	D. Cheatham
Bulletin Board Article	D. Cheatham
COVERAGE Article	D. Cheatham
Check Stuffer	D. Cheatham
Open Discussion	

JOB LINKED SKILLS PROGRAM
STATUS UPDATE

September 21, 1992

The current status of the Job Linked Skills (JLS) Program is as follows:

Timeline tasks started/completed since August 10, 1992 are:

- Administer standardized tests	Completed
- Maintain all class stats	Underway
- Begin teacher assisted training	Underway
- Review and revise software	Underway
- Begin department meetings	Underway
- Develop recruitment strategies	Underway
- Negotiate contracts	Completed
- Develop promotional flyers	Started 8/10/92
- Develop criterion-referenced assessments	Started 10/1/92
- Field test criterion reference tests	Started 10/19
- Begin Second Class	10/19/92

Next Advisory Council Meeting - October 19, 1992

Job Linked Skills Program (JLSP)
Status Update
September 28,1992

The Job Linked Skills program continues on schedule at this writing. The August 4th classes will conclude on Thursday, October 8,1992.

Since the class started we have had one employee who requested to be released from the class. The employee made the request based on the fact that while she appreciates being made aware of areas where additional growth is possible, she does not believe she needs these skills to do her current job. She does not aspire to move upward in the company and said she will pursue skill development if and when the time comes. She expected to be provided with information on the various types of forms that she uses everyday. I explained that the program is not designed to teach her how to do her current job, but rather works to ensure that employees have the skills needed to do their jobs. The employee stopped class on August 25th. The OIC instructors were notified on August 25th of the termination. The remaining partner (ISAL) and the Advisory Council were informed at the September 21st meeting.

Last week (September 21st) I was notified that two of our students have been promoted. Brenda Garrison and Michele Koppenhaver will start their new jobs before this class is over, however, management has agreed to allow them to complete the class.

Currently we have 177 pending requests for the JLSP class. Starting September 29th, Donna Cheatham will be meeting with department managers to identify participants for the next class.

Requests have come from the following areas:

DEPARTMENT	**NUMBER OF EMPLOYEES**
Customer Service Central	2
Other Party Liability	2
Customer Service Support	18
Dental/Vision	19
Central Site Processing	4
PB Claims Analysis	4
Dental Customer Service	5
PB Claims Review	2
Customer Service West	3
PB Claims Preparation	36
FEP Analysis	1
Customer Service East	6
Total Private Business	102

JLSP Status Continued...

DEPARTMENT	**NUMBER OR EMPLOYEES**
Post Payment Review	10
Med. Select Claims Adjudication	13
Medicare Review (NJ)	2
DME Dedicated Unit	4
Beneficiary Services	8
Post Payment Review (NJ)	2
Med. Claims Adjudication	8
Med. Claims Preparation	6
Med. Claims Adjudication (NJ)	2
Med. Claims Preparation (NJ)	1
Medicare Review	4
Provider Services (Toohey)	2
Med. Select Claims Adjudication (NJ)	1
Med. Professional Services	1
MSS&D	1
Total Government Business	65
Office Systems Support	1
PB National Accounts West	1
Input/Output Services	1
Automated Mail	1
Claims Systems Support	1
Financial Systems Services	1
Enrollment Systems Services	1
Financial Accounting Services	2
KHP Services	1
Total Non-PBU-GBU	10
Grand Total	177

I will begin making contacts today with the various managers to obtain class participants. This effort should be concluded by October 10,1992.

On Thursday September 24, I met with Bernie Scheaffer from Penn State regarding the scenarios being developed for the JLSP class. We received a copy of the five different situations that will be covered in the class, they are as follows:

1. Reading and completing forms
2. Reading and Using Manuals & Reference Books
3. Changing Manuals
4. Making Decisions
5. Writing Clearly

We are in the process of reviewing the scenario #1 and will provide input back to Penn State by October 9th on any problems or concerns with content as it relates to the Blue Shield environment.

JLSP Status Continues

Based on the information derived from the initial assessment of the first three groups, there is a need for more emphasis on grammar, spelling and writing. The students also have indicated that they would like to spend more time on this area of performance. To support this need, Penn State was requested to work on #5 (Writing Clearly). Writing clearly will be the next scenario available for our January class.

Attached is a copy of the scenarios planned for inclusion in this project. Also included is a copy of the evaluator's initial review of the project. Mr. Brown spoke at the partner's meeting and advised us that things appear to be progressing well and that open lines of communication exist between all areas. He is pleased with our activity to date.

Donna M. Cheatham
September 28, 1992

ADVISORY COUNCIL MEETING AGENDA

November 9, 1992

Meeting Minutes	D. Cheatham
Classroom Activities	J. Woodyard
Scenario Development Update	N. Askov
Time Logs	G. Rickards
Logo/Bulletin Board Article	D. Cheatham
Open Discussion	

ADVISORY COUNCIL MEETING MINUTES

November 9, 1992

Attendees:
Dwight Anklum
Jeff Auer
Gayle Brady
Arlene Burno
Fran Crumlich
Lori Gray
Robin Holtry
Jackie Hoover

Partners:
Donna Cheatham
Gerry Rickards
Bernie Sheaffer
Jeff Woodyard

Guest:
Dave Rippey

Absent:
Nikki Askov
Emory Brown
Doris Donald
Priscilla Ferguson
Andrew Thomas
Becky White

The meeting minutes for the September 19, 1992 meeting have been reviewed by all members except Fran Crumlich, Jeff Auer, and Gerry Rickards. All council members who reviewed the minutes found them acceptable. Copies will be forwarded to Fran, Jeff, and Gerry.

Classroom Activity - Jeff Woodyard

Classes began October 19, 1992; 71 employees are attending class. A notebook of class activities was distributed. The notebook enables the students to work at their own pace. The notebook will be revised to accommodate subsequent scenarios. Pretesting has worked very well in facilitating a more fast-paced learning experience for the students. The instructors have been able to get to the meat of the matter in a shorter timeframe than previously experienced. There is a good mix of students in the night shift class and despite the language barriers, the students are progressing very well. According to some students from EPD, some supervisors are referring to the Job Linked Skills Program as a Literacy class. Donna Cheatham will attempt to reinforce the need for management to be sensitive to the negative connotations associated with the word literacy.

Scenario Development - Bernie Sheaffer

Bernie indicated that she lost some ground due to her recent surgery. She is currently working on the writing/grammar scenario. She provided the council with the writing samples that will be included in this part of the training package. The samples show both correct and incorrect grammar. Students will have to determine which sample is correct and why it is correct. The writing scenario is expected to be completed by the end of November, 1992. On December 3 and 4, she plans to review the writing scenario. The following people will assist in this review:

December 3, 1992, Keystone Training Center, Derry Street, 10:30 a.m.

Jackie Hoover
Gayle Brady
Fran Crumlich
Lori Gray
Robin Holtry
Jeff Auer

December 4, 1992, Center Street, 1A 101, 10:30 a.m.

(This is for manual/reference material review)

Arlene Burno
Dwight Anklum

Bernie will also meet with Customer Service to review how their on-line Preference system is being utilized by Customer Service. Arlene Burno will contact Bernie directly with the date and time of the classes being conducted on the Preference system. Bernie is welcome to come and review this system any time. The next scenario to be written will be reading and using reference materials.

Budget - Gerry Rickards

All partners are requested to have invoices in to Gerry Rickards by November 15 (November 16 at the latest).

Testing - Donna Cheatham

Discussion ensued concerning the TABE test results and what this test data means to the program. It was pointed out by Mr. Woodyard that test data doesn't necessarily reflect how well or how much a person has learned at the Job Linked Skills Program class. That is, the students may have learned to take a test differently. Too, their attitude toward tests may have changed, thereby, netting better test performance. Donna Cheatham questioned when the Criterion Reference Test will be available for use in the classrooms. Bernie Sheaffer indicated this test should be ready by the end of December. This test will be more online with medical insurance and the course content.

A copy of the outline of all scenarios scheduled for inclusion in the Job Linked Skills Program course is attached for your reference.

The next council meeting is scheduled for **Monday, December 7, 1992.**

PLEASE NOTE DATE CHANGE FOR MEETING WITH BERNIE SHEAFFER!!!

SCENARIOS

SCENARIO	SECTIONS	CASAS SKILLS	JOBS
Reading and completing forms	Reading and finding information from simple medical claims forms Reading and finding information from claims history forms Completing forms with information from another form	Read and interpret general vocational vocabulary Identify abbreviations, symbols and codes specific to the job Read and interpret charts, graphs, and forms Read directions and interpret basic computer materials, e.g., printouts, software programs, etc. Record date, time and other requested information on work forms, charts, graphs Write common abbreviations and codes specific to job	All

Reading and Using Manuals and Reference Books	Using Table of Contents Using Index Using Headings Finding information from lists Using a medical dictionary and the ICD9 to find specific codes for diagnoses Answering specific questions found in text	Read and interpret general vocational vocabulary Read and locate information listed in alphabetical order Utilize reference materials Identify abbreviations and codes specific to job Read and interpret specific information from written materials Utilize table of contents, index, and appendices in textbooks, manuals, and handouts Read and interpret charts, graphs, tables and forms	All

Changing Manuals	Reading memo Finding correct place in manual Changing manual according to memo Answering questions according to new information	Read and interpret general vocational vocabulary Read and locate information listed in alphabetical order Utilize reference materials Identify abbreviations, symbols, and codes specific to job Read and interpret written instructions from supervisor Utilize table of contents, index, and appendices in manuals and handouts Read and interpret charts, graphs, tables, and forms Record date, time and other requested information on work forms, charts, graphs	All

Making Decisions	Given decision to make, finds place to find answer Makes if..., then decision according to information found	Read and interpret general vocational vocabulary Read and locate information listed in alphabetical order Utilize reference materials Identify abbreviations and codes specific to job Read and interpret specific information from written materials Utilize table of contents, index, and appendices in textbooks, manuals, and handouts Read and interpret charts, graphs, tables and forms Demonstrate ability to differentiate, sort, and classify information Identify effective problem-solving strategies	

Writing Clearly	Grammar, spelling Choosing most clearly written text Writing clearly	Utilize appropriate mechanics of standard English Write information in clear, logical and complete manner Write short notes and/or simple memos Write letters using correct structure and sentence style Use computer for simple word processing	Correspondent, Customer service (all for short memos)

A LEGACY OF CARING
JOB LINKED SKILLS PROGRAM
ADVISORY COUNCIL MEETING
DECEMBER 7,1992

AGENDA

CURRENT CLASS ACTIVITY	JEFF WOODYARD
CURRENT CLASS - SURVEY RESULTS	EMORY BROWN
SCENARIO DEVELOPMENT	BERNIE SHEAFFER
DISTANCE LEARNING	DONNA CHEATHAM
CLASS SCHEDULE	DONNA CHEATHAM
TIME LOGS	ANGELA STECK
OPEN DISCUSSION	

ULSP

ADVISORY COUNCIL MEETING MINUTES

December 7, 1992

Present

Council - Dwight Anklum
Gayle Brady
Arlene Burno
Frances Crumlich
Robin Holtry
Jackie Hoover
Andrew Thomas

Partners - Emory Brown
Donna Cheatham
Priscilla Ferguson

Admin Asst - Angela Steck

Guest - Bernie Sheaffer

Absent

Council - Jeff Auer
Doris Donald
Lori Gray
Becky White

Partners - Eunice Askov
Gerry Rickards
Jeff Woodyard

Current Class Activity . . . . Priscilla Ferguson

Classes are going fine. Writing exercise has been done. Derry Street class is going fine also. There are eight (8) classes going on at present, with a total of 71 participants. Evening class, most of the students are not English speaking; they are learning parts of the words to help with medical terminology.

Survey Results . . . . Emory Brown

The class has taken the TABE, Everyday Problem Test (EPT), and the attitude survey. There was a positive change in the direction for post-tests for both language and reading. Grade equivalency also increased significantly for both reading and language. EPT - measures skills with everyday activities (food, health, phone, consumer, finance, household, and transportation). Again, scores improved significantly for the post test. We are going to try to do all testing before class begins.

Criterion Reference Test (CRT) . . . . Bernie Sheaffer

CRT will be ready January 18. Reading section - paragraphs to read - types of things read in manuals (written for 10th - 11th grade reading level. Forms questions, indirect, straight vocabulary questions, straight grammar section. Our focus should be on what is critical to their job. Medical terminology will not be a big part of the test, only 1-2 questions. EPT was not part of the proposal to the government. Time is a concern but this test is needed.

The class is for everyone! Noone will be turned away. Emory discussed the pre- and post- attitude survey. Very positive!

Scenario Development . . . . Bernie Sheaffer

Manual reading - ability to get on-line help, give a specific title, find correct manual on shelf and give answer. There will be some reading instruction. There will be a writing part that will be graded by the instructor. CRT will be ready for January's test. Manual reading will not have Preference but similar to it. Example will be personnel manual, policy manual, diagnosis manual, etc. Reading scenarios will be reading things that are difficult to read. How can you get the most out of it when you do not understand.

Distance Learning . . . . Donna Cheatham

NovaNET - up and running. Five laptops, five modems with four connections in the Learning Center, and two connections in Derry Street. The laptops are out and one employee in class now is using the system. Grammar, language, reading, games, etc. are on the system.

Next class will begin January 18th.

We will be planning a breakfast/brunch for focus group, advisory council, boss's, etc.

Meeting adjourned at 12:00 noon.

JLSP

ADVISORY COUNCIL MEETING MINUTES

February 8, 1993
10:00 a.m. - 12:00 noon

Attendance

Council Members

Jackie Hoover
Gayle Brady
Lori Gray
Robin Holtry
Dwight Anklam
Jeff Auer
Fran Crumlich
Arlene Burno
Andrew Thomas

Guests

Bernie Sheaffer
Marge Janos

Partners

Donna Cheatham
Emory Brown
Gerry Rickards
Jeff Woodyard

Administrative Assistant

Angela Steck

Absent

Nickie Askov
Doris Donald
Becky White

Current Class Activity - Jeff Woodyard

Evening hours for night shift changed to 4-8 p.m. on Wednesdays; classes going well (61 people); there is a new instructor at Derry Street. Students are enthusiastic; there are new activities to choose from; Criterion Reference Test being used. Jeff is interested in speaking to people interested in the program in a group so they know what to expect before coming to class.

JLSP classroom will open on March 1, 1993 at Center Street

Donna introduced Marge Janos who will be helping with the JLSP classes.

erry Street - Gerry Rickards

ontinue to hold JLSP classes and Learning Center activities; students very nthusiastic and love the facility. This is the second class to be held at Derry Street.

Bernie Sheaffer

Writing scenario consists of grammar mainly; information is given for the students to write a letter. Instructors will grade the letters. All new disks will be given to install.

Manual reading scenario should be ready by the beginning of March - reading content, reading memos, reading table of contents, etc. Mary Stories will be corrected. The problem was there were words omitted.

Donna Cheatham

We have had two students who had a negative commentary; felt instructor was not organized and the fact of having two instructors; due to lack of communication, classed had to be moved for 4 classes; some classes were held in the cafeteria--in all ctuality the instructors were organized! Otherwise, she liked the class.

Laptops are out; some of our students have very low skill levels. NovaNET would help them with this. We have volunteers wanting to take home the laptops.

Criterion Reference Test

Given to 61 students before class began; will compare the post-test when class is completed.

Evaluation - Emory Brown

Emory will be able to do data as soon as Donna does the last test tomorrow. Emory will be doing some interviewing of some students from the last class.

We are currently working on a luncheon/breakfast meeting for advisory council, 1st class and Sr. VP's and President; we should have a date next week.

Advisory Council members can attend classes at any time, just let Donna or Angela know if you are interested. There is a possibility of being a whole-day meeting next month so everyone on the council can see the program and see how it runs.

Donna informed the council about the High School Program called "Achieve" at Cumberland Valley High School - it allows for adults who have not received their diploma to receive it through some courses. There are some employees in the Company who are going through the program.

BEST COPY AVAILABLE

We must have 200 people through the JLS class by the end of the grant. Managers have been very cooperative.

Next meeting will be held on March 15, 1993 in room 439/441 at 10:00 a.m.

Meeting adjourned.

Respectfully submitted,

Angela J. Steck

Angela J. Steck
Administrative Assistant

JLSP

ADVISORY COUNCIL MEETING MINUTES

May 10, 1993

Attendance

Advisory Council

Dwight Anklam
Gayle Brady
Lori Gray
Jackie Hoover
Lori Slentz
Andrew Thomas

Partners

Donna Cheatham
Emory Brown

Administrative Assistant

Angela Steck

Donna introduced our new advisory council member -- Lori Slentz. She replaces Doris Donald.

There is a 3-month extension on the grant for the JLSP - October '93 to January '94. The new grant would focus on basic skill needs - below the 8th grade level. Many of the individuals at 1st and 2nd grade levels are English as a Second Language.

OIC has agreed to provide PBS with instructors for the remaining classes.

Emory Brown

Emory had some handouts of the past and present classes. (See Attached)

The rest of the meeting was preparing for the Successfest which runs from May 11, 1993 - May 13, 1993.

Meeting adjourned at 11:28 a.m.

Respectfully submitted,

Angela J Steck

Angela J. Steck
Administrative Assistant

Pennsylvania
BlueShield

1800 Center Street
Camp Hill, PA 17089-0089

PROGRESS REPORT FOR BLUE SHIELD "LEGACY OF CARING' WORKPLACE EDUCATIONAL PROGRAM

May, 1993

The January class with 61 students has completed the program and a new class is underway. For the January class, data have been collected before and after for TABE, CRT, and attitude survey. Personal interviews have also been conducted with several of the students during the class and soon after completion.

Pre and post attitude data are included with this report for 61 students at the beginning and 45 at the completion. Students felt very good about taking the program before and after. They became more favorable about using the computer for learning. Attitudes changed very little about chances of getting a job within BLUE Shield but did improve about getting a job outside. In general, students were optimistic about the program helping with job performance both before and after. About three out of four feel satisfied with working at Blue Shield. Since attitudes were rather favorable at the beginning it was not expected that there would be much change.

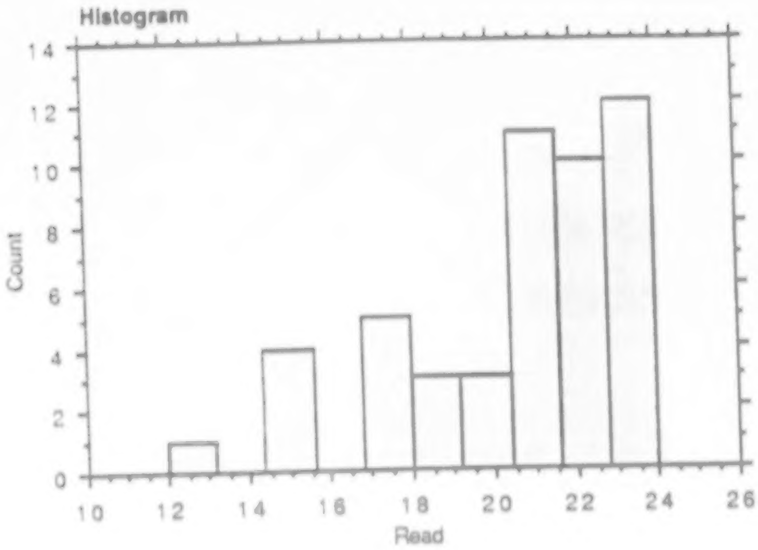
Students were given the opportunity to write comments about the course. Most felt the class helped them personally and with skills related to the job. Several would like to have had more on communications, including writing, reading, and spelling. They rated the teachers very high and liked the favorable atmosphere for learning. A few cited mistakes in the software. One criticized the amount of terminology. Several said they would recommend the course to their colleagues.

The TABE data have not been analyzed. Pre CRT scores were very high on subtests reading, grammar, forms, and vocabulary. Scores on vocabulary were highest with a small variance. Scores on grammar showed the most variance. This might explain the pervasive suggestion that more grammar be included in the course. Post CRT scores have not been tabulated.

BLUE SHIELD JAN CLASS
CRT PRE TESTS

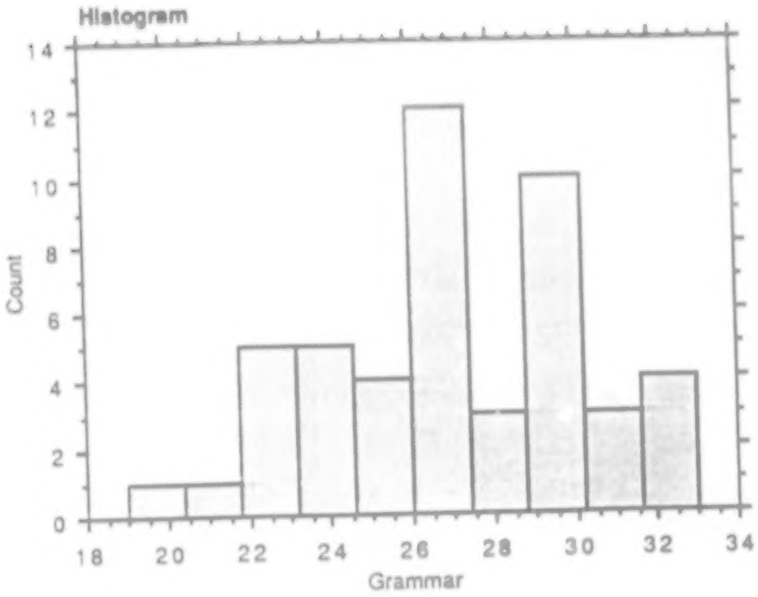
Frequency Distribution for Read

From (≥)	To (<)	Count
12.000	13.200	1
13.200	14.400	0
14.400	15.600	4
15.600	16.800	0
16.800	18.000	5
18.000	19.200	3
19.200	20.400	3
20.400	21.600	11
21.600	22.800	10
22.800	24.000	12
	Total	49



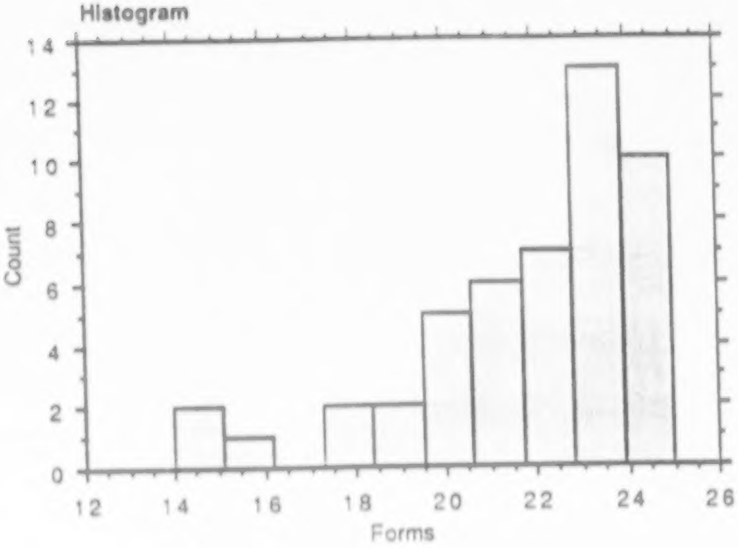
Frequency Distribution for Grammar

From (≥)	To (<)	Count
19.000	20.400	1
20.400	21.800	1
21.800	23.200	5
23.200	24.600	5
24.600	26.000	4
26.000	27.400	12
27.400	28.800	3
28.800	30.200	10
30.200	31.600	3
31.600	33.000	4
	Total	48



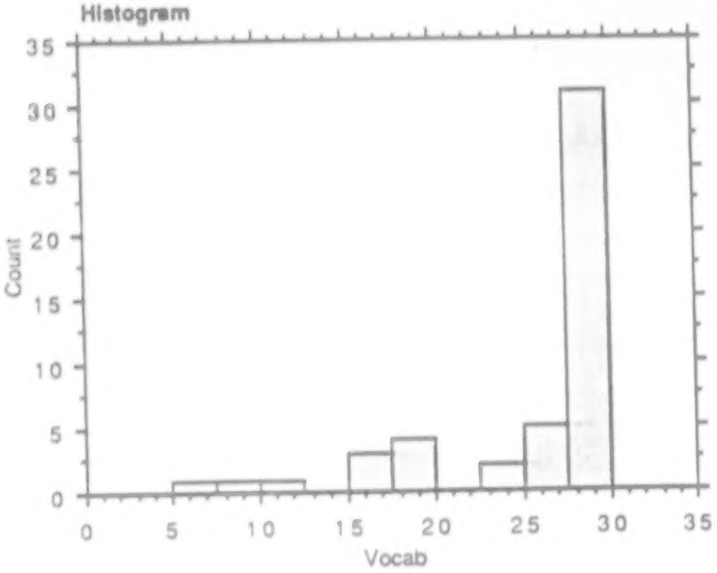
Frequency Distribution for Forms

From (≥)	To (<)	Count
14.000	15.100	2
15.100	16.200	1
16.200	17.300	0
17.300	18.400	2
18.400	19.500	2
19.500	20.600	5
20.600	21.700	6
21.700	22.800	7
22.800	23.900	13
23.900	25.000	10
	Total	48

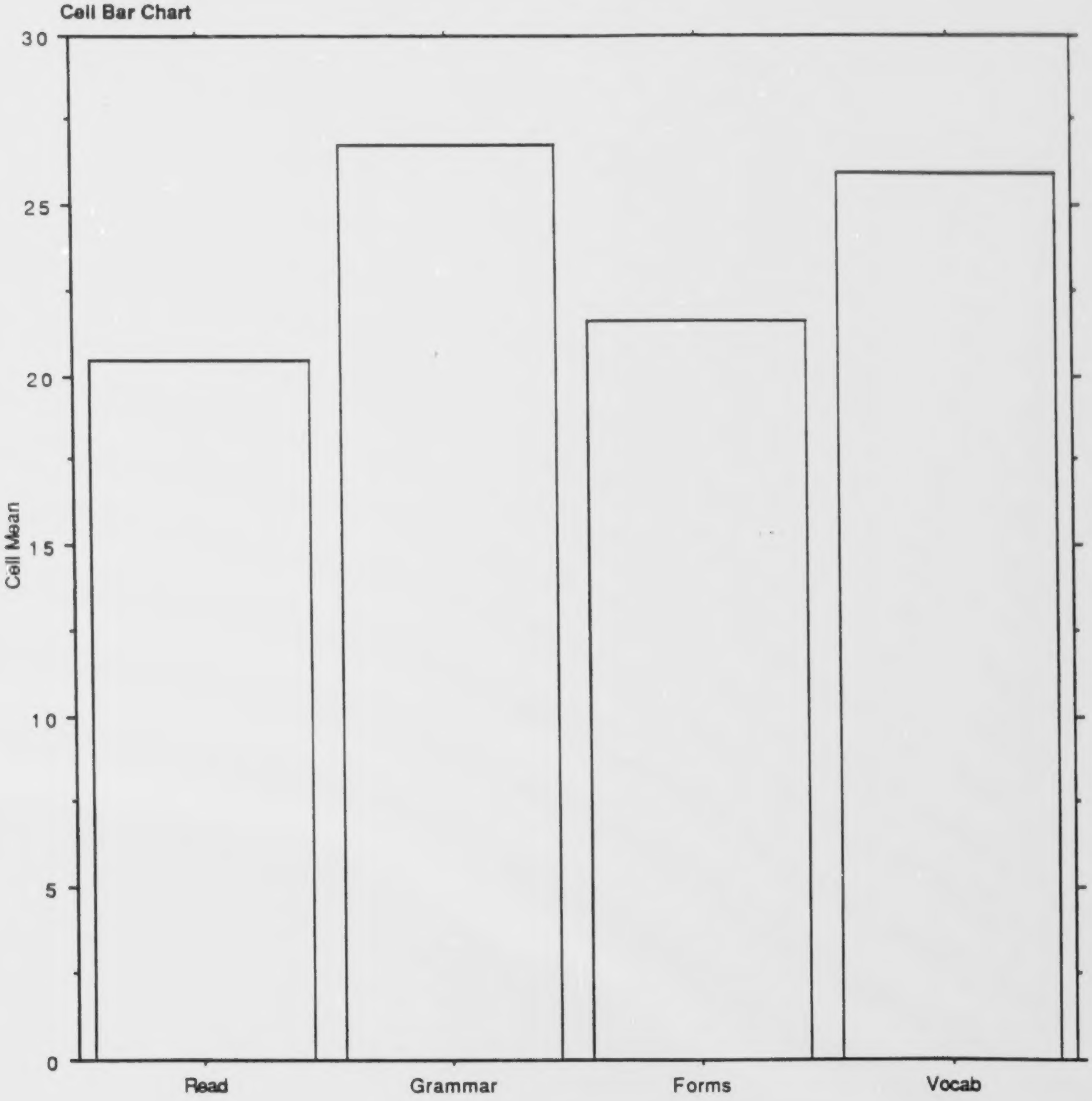


Frequency Distribution for Vocab

From (≥)	To (<)	Count
5.000	7.500	1
7.500	10.000	1
10.000	12.500	1
12.500	15.000	0
15.000	17.500	3
17.500	20.000	4
20.000	22.500	0
22.500	25.000	2
25.000	27.500	5
27.500	30.000	31
	Total	48



BLUE SHIELD JAN CLASS
CRT PRE TESTS



BLUE SHIELD
Job Linked Skills Program
TABE Pre Tests (N=61)
January Class

Scale Scores

Descriptive Statistics

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
R. Voc SS*	793.098	57.495	7.361	61	623.000	865.000	0
R. Com SS*	768.246	34.883	4.466	61	624.000	806.000	0
R. Tot SS*	780.918	45.019	5.764	61	631.000	836.000	0
L. Mec SS*	717.279	46.946	6.011	61	565.000	793.000	0
L. Exp SS*	749.426	55.671	7.128	61	544.000	841.000	0
L. Tot SS*	733.639	48.751	6.242	61	555.000	802.000	0

Grade Equivelants

Descriptive Statistics

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
R. Voc GE*	11.193	3.165	.405	61	2.800	12.900	0
R.Com GE*	11.162	2.923	.374	61	2.600	12.900	0
R. Tot GE*	11.200	3.032	.388	61	2.800	12.900	0
L. Mec GE*	8.964	4.034	.516	61	1.100	12.900	0
L. Exp GE*	10.131	3.612	.462	61	1.700	12.900	0
L. Tot GE*	9.630	3.722	.477	61	1.300	12.900	0

Percentiles

Descriptive Statistics

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
R. Voc Perc*	94.230	101.793	13.033	61	11.000	853.000	0
R.Com Perc*	79.623	26.019	3.331	61	5.000	99.000	0
R. Tot Perc*	81.607	25.251	3.233	61	8.000	99.000	0
L. Mec Perc*	71.000	29.918	3.831	61	3.000	99.000	0
L. Exp Perc*	76.033	25.161	3.222	61	3.000	99.000	0
L. Tot Perc*	75.262	26.822	3.434	61	2.000	99.000	0

ADVISORY COUNCIL MEETING MINUTES

June 16, 1993
10:30 a.m. - 1:30 p.m.

Attendance

Council Members

Lori Gray
Andrew Thomas
Dwight Anklam
Becky White
Lori Slentz
Jeff Auer

Partners

Nickie Askov
Donna Cheatham
Emory Brown
Gerry Rickards
Jeff Woodyard

Staff

Marge Janos
Angela Steck

Guests

Dave Rippey
Mark Dively
Karen Drayton

Meeting was opened by Donna Cheatham

Donna introduced Dave Rippey to discuss the Operational Framework of Training and Development. (See Attached) Dave defined the learning organization - organizations which are going to succeed are those that learn; job mastery is the key. Workforce 2000 is the study that the government produced approximately 5 years ago.

Project Status Report - Donna Cheatham

* 41 people in current Job Linked Skills Program

* 201 people will have completed the program at the end of current class

Classroom Report - Jeff Woodyard

* 5 classes going on at this point - 4 Center Street, 1 Derry Street

* 6,242 contact hours - 30 hours per person

* OIC will revamp the paper/pencil work for the next class beginning in late July (more interactive)

* OIC will develop Individual Education Plan

* Next begins July 26, 1993

Software Report - Nickie Askov

* Job task analysis, etc. - just about complete, in the revision stage now

Evaluator's Comments - Emory Brown

* handout of evaluation design for Pennsylvania Blue Shield (See Attached)

Budget Report - Gerry Rickards

* 65% of money has been spent and we have 2 more quarters to go through

* going well from our perspective in the budget

Next Class Status - Marge Janos

* 75 names for next class at this moment

* Marge will start to pre-screen this week; a suggestion was made that maybe an orientation could be given at the time of pre-screening

Successfest Report - Angela Steck

* 226 people registered for JLS Program during Successfest (May 11 - 13)

* 661 employees on list - 201 employees have gone through the program = 460 employees remaining on list

* 4 tours were given of the JLS Center

Donna recognized Mark Dively and Karen Drayton for their support of the Job Linked Skills Program with a planter given to each.

Meeting adjourned at 1:17 p.m.

Respectfully Submitted,
Angela J Steck
Angela J. Steck
Administrative Assistant

ADVISORY COUNCIL MEETING MINUTES

September 13, 1993

Council Members Present

Arlene Burno
Andrew Thomas
Jackie Hoover
Gayle Brady
Robin Holtry
Lori Gray
Jeff Auer
Fran Crumlich
Becky White
Dwight Anklam

Guest

Karen Bowser

Partners Present

Jeff Woodyard
Nickie Askov
Emory Brown
Gerry Rickards

Staff Present

Marge Janos
Angela Steck

Absent

Donna Cheatham
Lori Slentz

Gerry Rickards chaired the meeting in Donna Cheatham's absence. Karen Bowser was introduced as the Manager, Continuing Education.

Jeff Woodyard - Classroom Report

There are five (5) classes running at this time: Wednesday a.m. (Derry Street), Wednesday p.m. (Center Street), plus three (3) classes at Center Street during the day. There are 251 people through the program. The next class will begin October 18, 1993. Jeff is waiting for one more computer module -- Using Reference Material.

Emory Brown - Evaluator's Comments

See attached.

Pennsylvania
BlueShield
1800 Center Street
Camp Hill, PA 17089-0089

Nickie Askov - Software Report

The whole program is going through quality control at this time. The quality control process is done to correct punctuation, grammar, etc. Bernie Sheaffer is writing the manual that the government needs -- need 5 copies of manuals and courseware. Conference is next week.

Marge Janos - Next Class Report

Pre-screening will begin the week of September 20, 1993. Next class begins October 18, 1993. Managers received a list of volunteers for the program; they are to choose who they want in the next class.

Becky White suggested putting an article in the COVERAGE or a check stuffer about the program--make a game of it "test your skills". Dwight Anklam suggested a video be put together and shown around the company. Jeff Auer can put a video together for us. Angela Steck suggested a memo be sent to Staff List I and II again regarding the program and asking for students who have a need for the program.

Emory would like to interview some of the partners and the advisory council. He would like to also interview some supervisors from areas with employees from prior classes.

Meeting adjourned at 11:25 a.m.

Respectfully submitted,

Angela J. Steck
Administrative Assistant

BLUE SHIELD JANUARY CLASS
CRT PAIRED T-TESTS N=35

Paired t-test
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
Read, Read	-.657	34	-1.322	.1949

Paired t-test
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
Grammar, Grammar	-1.086	34	-1.961	.0581

Paired t-test
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
Forms, Forms	-.629	34	-1.758	.0878

Paired t-test
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
Vocab, Vocab	-.143	34	-.190	.8508

Paired t-test
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
PRE TOTAL, POST TOTAL	-2.514	34	-1.836	.0751

PROGRESS REPORT FOR BLUE SHIELD 'LEGACY OF CARING' WORKPLACE EDUCATIONAL PROGRAM

September 1993

The class which began in April 1993 took the TABE, CRT, and attitude tests before and after. For the CRT test, data were available for 35. The changes were in the positive direction for all four sub-tests. At the .05 level, only grammar showed a significant difference. The change in total score had a p value of .18. Only a small change occurred for vocabulary but larger ones for reading and reading medical forms. These changes are similar to the January class (N=35) where the total score difference was nearly significant, .07 level. For sub-tests, grammar and reading forms had a p value of .05 and .09 respectively. For vocabulary, change was minimal.

We have not analyzed the TABE and attitude data.

The pre-TABE data for the January class showed an average grade equivalent reading level of 12.9 and a language level of 10.2 (N=41). For two who scored very low on the TABE, the changes on the CRT test were much larger than for the average of the class.

Personal interviews were conducted with three sections of the present class on August 31, 1993. (The 8:30 a.m. class of nine rated the grammar and medical terminology as the most valuable. Nothing was given a negative rating. They felt the course will help them with their present job performance and increase their chances of getting a better job. They were very enthusiastic about the teacher. The 10:45 a.m. class of nine also felt the grammar and medical terminology were very valuable. Several said they had forgotten much of what they knew about grammar. Only one felt it was boring. The ones who did not work with medical terminology liked it because it increased their understanding of the work in the organization and it could help them get a promotion. The class members said it was important for the class to be held on clock time. They liked the teacher very much. One mistake in the software was pointed out. The 1:30 p.m. class of six gave medical terminology as being most beneficial. One said grammar. All except one said everything will be beneficial. One did not like the writing required. A few did not like the way reading medical forms was set up on the computer. Students in this class and the others would recommend the class to their colleagues. They liked the teacher who made things interesting. Most said it was important to have the class on the clock.

The instructors have been interviewed about the class progress and suggestions for improvement. All are very satisfied with the classes. Print materials have been used to supplement the software, with emphasis on English and grammar skills. One suggested separating future classes into high- and lower-level readers. Students also should be informed of the total content of the course when they enroll.

BLUE SHIELD APRIL CLASS
PRE & POST CRTs N=35

PRE TESTS

Descriptive Statistics

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Read	20.486	3.518	595	35	9.000	24.000	0
Grammar	26.971	3.952	668	35	14.000	34.000	0
Forms	20.971	3.321	561	35	13.000	25.000	0
Vocab	25.029	5.586	944	35	7.000	29.000	0
Total	93.457	14.718	2.488	35	43.000	107.000	0

POST TESTS

Descriptive Statistics

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Read	21.171	2.407	.407	35	15.000	24.000	0
Grammar	28.057	3.046	515	35	23.000	33.000	0
Forms	21.629	4.400	744	35	0.000	25.000	0
Vocab	25.086	4.047	684	35	8.000-	29.000	0
Total	95.943	11.217	1.896	35	60.000	107.000	0

PAIRED T-TESTS
HYPOTHESIZED DIFFERENCE = 0

	Mean Diff.	DF	t-Value	P-Value
Read, Read	686	34	1.353	1849

	Mean Diff.	DF	t-Value	P-Value
Forms, Forms	.657	34	.865	.3823

	Mean Diff.	DF	t-Value	P-Value
Grammar, Grammar	1.086	34	1.950	.0594

	Mean Diff.	DF	t-Value	P-Value
Vocab, Vocab	.057	34	.100	.9209

	Mean Diff.	DF	t-Value	P-Value
Total, Total	2.486	34	1.369	1796

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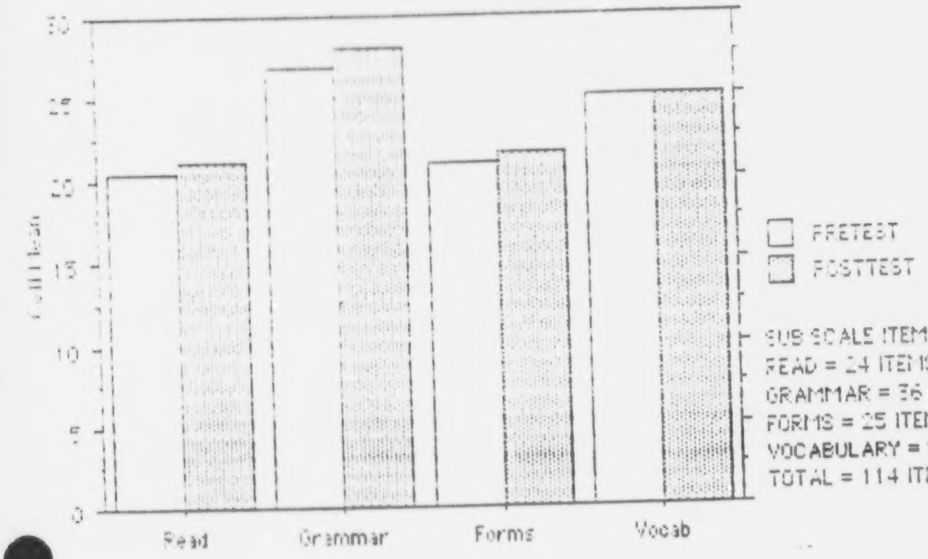
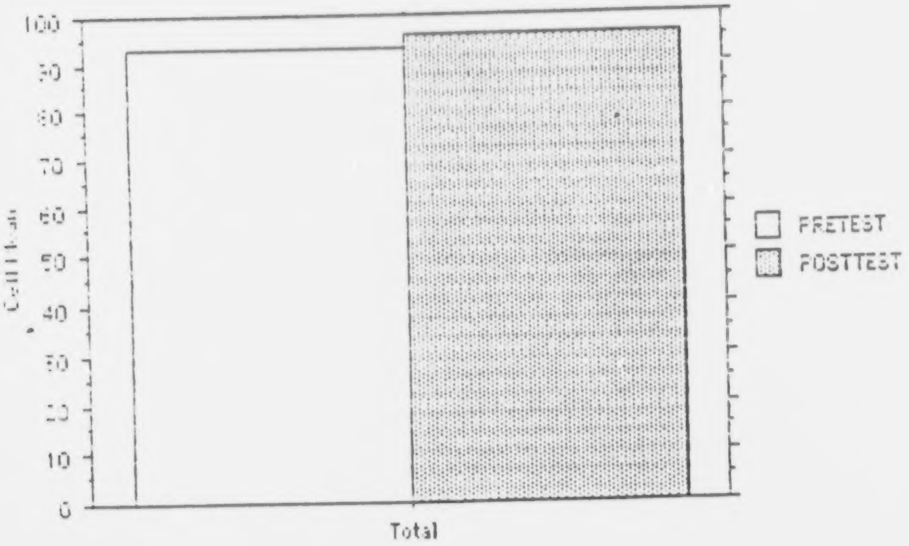
BLUE SHIELD APRIL CLASS
PRE/POST CRT BAR CHARTS
N=35



SUB SCALE ITEM COUNTS:
READ = 24 ITEMS
GRAMMAR = 36 ITEMS
FORMS = 25 ITEMS
VOCABULARY = 29 ITEMS
TOTAL = 114 ITEMS



APPENDIX B

TO: Those Listed

FROM: D. M. Cheatham, Director
Literacy Programs

SUBJECT: Job Linked Skills Program Meetings

As you know, we have been scheduling meetings to apprise you of the activities related to our Job Linked Skills program which will be occurring the next several months. The following are the dates and times that the meetings will be held:

July 28, 1992 -- Special Functions Room, 1B L1
10:00 a.m., 10:40 a.m., 11:15 a.m., 2:00 p.m., 2:40 p.m.

August 5, 1992 -- Training Room E/F, 2A L1
10:00 a.m., 10:40 a.m., 11:15 a.m.

If you would like to schedule a time, please call Angela Steck at extension 7322.

206a92.dc/ajs

To: L. Bultena
E. Bylotas
S. Cline
D. Early
M. Howe
B. Hummer
J. Kelser
R. Laudenslager
P. Letnaunchyn
J. Luciano
K. Luisi
G. Mann
T. Marsh
J. Robertson
S. Scott
D. Sterner
C. Sweigart
L. Titzell
S. Toohey
T. Trayer

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February 19,1993

Dear Manager,

Several months ago our first Job Linked Skills class commenced and you provided data relative to the current performance of employees attending the class. In addition, you provided information on another employee not attending the class. Well, we're back again requesting a three month follow-up on these employees.

We would like to know what their performance, attendance, quality, etc. are as of the end of January. This data is needed to provide the government with comparative statistics relative to students attending the class and a peer not attending the class.

We would like performance data for each person identified on the attached for the months of October 1992 through January 1993. We have provided a copy of your original response to assist you.

We do not wish to burden you too heavily. We would like this data returned by March 19, 1993.

If you have any questions regarding this request, please contact me at EXT 8859 or Angela Steck at EXT 7322.

Your support is appreciated.

Sincerely,

Donna M. Cheatham

Donna M. Cheatham
Continuing Education Director

**Pennsylvania
BlueShield**
1800 Center Street
Camp Hill, PA 17089-0089

JOB LINKED SKILLS PROGRAM
COMPARATIVE ANALYSIS

MANAGER________________________ UPDATE: NOV '92 - JAN '93

EXTENSION______________________

EMPLOYEE____

SUPERVISOR____________________________DATE________________

ATTENDANCE__________________ (DAYS LOST)

PRODUCTION__________________ (PERCENT OF STANDARD)

____

Superior	--	Low	Medium	High
Satisfactory	--	Low	Medium	High
Marginal/Fair	--			

QUALITY __________________ (ERROR RATE)

Superior	--	Low	Medium	High
Satisfactory	__	Low	Medium	High

	Not Reliable	Avg Reliability	Very Reliable
Reliability	1	2	3
Adaptability	1	2	3
Cooperation	1	2	3
Attitude	1	2	3

ADDITIONAL COMMENTS: RE: Attitude, behavior, interaction, dept. changes that might affect major performance changes)

JLSP

TO: Those Listed April 2, 1993

FROM: D. M. Cheatham
Continuing Education Director

SUBJECT: Job Linked Skills Center Open House

Monday, April 12, 1993 is the opening of the new Job Linked Skills Center as part of the Open House sponsored by the Training and Development Division. The Center is located on 2B L2 (next to the Learning Center) and will be open from 9:00 a.m. until 3:00 p.m. especially to provide Pennsylvania Blue Shield employees with information about the program. Refreshments will be available.

We are extending a special invitation to you because of your interest in the Job Linked Skills Program. Please come--and bring a fellow employee along to show them what the Job Linked Skills Program is all about!

ajs

Pennsylvania
BlueShield
1800 Center Street
Camp Hill, PA 17089-0089

TO: Those Listed

July 20, 1993

FROM: D. M. Cheatham
Continuing Education Director

SUBJECT: Job Linked Skills Program

As you know, the next Job Linked Skills classes will begin the week of July 26, 1993. The attached listing reflects the date and time that your respective employees should attend class. There is a page for Monday/Wednesday classes, Tuesday/Thursday classes, and a page for the East Park and night shift classes that are held in the Derry Street Learning Center and at the Center Street complex respectively.

Please notify your employees of their scheduled time of attendance. If there is a need for us to make revisions to our schedule, please contact Marge Janos at 561-0211, in her absence, Steve Noss will assist you. Steve can be reached at the same number.

I would like to express my thanks to all of you for being so cooperative in working with Marge as she endeavored to complete the pre-screening. We completed the last screening today and are looking forward to working with your staff.

As always, your support and cooperation are appreciated!

To:
P. Brown
D. Early
D. Evans
L. Hicks
J. Kelser
R. Laudenslager
S. McCarver
J. Robertson
B. Spencer
A. Sproule
K. Siburt
L. Titzell
S. Toohey
B. Torres
P. Hykes
L. Kluger
M. Legg
M. Picioccio
M. Howe
P. Kroh
P. Lally
L. Davinroy
C. Rudnick
L. Hamilton
R. Eichelberger
R. Prior
K. Deiter
C. Miller
D. Motter
V. Truett
C. Warner

cc:
D. Rippey
G. Rickards
M. Janos
S. Noss

Pennsylvania
BlueShield
1800 Center Street
Camp Hill, PA 17089-0089

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JOB LINKED SKILLS PROGRAM

ROSTER

JULY 26, 1993 - OCTOBER 1, 1993

Monday/Wednesday

8:30 - 10:30 a.m.

Roxanne Smith	(Peg Brown)
Phun Liang	(Linda Hicks)
Mary Poteat	(Sandy McCarver)
Thu Ngo	(Sandy McCarver)
Pat Varner	(Jean Robertson)
Susie Snyder	(Bill Spencer)
My Ngo	(Kath Siburt)
Carmen Gonzalez	(Bob Torres)
Stephanie Sinclair	(Joan Kelser)
Janna Plessinger	(Pam Kroh)

10:45 a.m. - 12:45 p.m.

Christine Wright	(Ann Sproule)
Doris Jean Zeigler	(Kath Siburt)
Marlo Clancy Davis	(Linda Titzell)
Beatrice Beers	(Michael Howe)
Rhonda Terry	(Connie Miller)
Dale Ruland	(Donna Motter)
Freda James	(Joan Kelser)
Kim Tran	(Sandy McCarver)
Mary St. Germain	(Donna Motter)
Linda Wynn	(Lynne Hamilton)

1:30 - 3:30 p.m.

Wendy Haas	(Bill Spencer)
Melissa Holt	(Ann Sproule)
Karin Watkins	(Kath Siburt)
Kristin Kauffman	(Linda Titzell)
Anita Frank	(Sharon Toohey)
Verna Holton	(Michael Howe)
Kelly MeHaffie	(Pam Kroh)
Terry O'Connor	(Cabrini Rudnick)
Vickie Henry	(Donna Motter)
Allison Beaston	(Rochelle Laudenslager)

JLSP ROSTER
July 26, 1993 - October 1, 1993

Tuesday/Thursday

8:30 - 10:30 a.m.

Darnell Williams	(Cheatham)
Diane Napier	(Linda Titzell)
Chrysan Howard	(Deb Evans)
Rachel Weibley	(Sharon Toohey)
Phyllis Harvey	(Michael Legg)
Lois Wagner	(Pat Lally)
Cheryl Kissinger	(Dick Prior)
Sherry Collins	(Michael Howe)
Jane Carberry	(Pam Kroh)
Stacey Musser	(Rochelle Laudenslager

10:45 a.m. - 12:45 p.m.

Pam Snyder	(Sharon Toohey)
Jacqueline Smeltzer	(Peg Brown)
Pragna Patel	(Linda Hicks)
Tina Paulus	(Sandy McCarver)
John Talton	(Jean Robinson)
Blanche Kitner	(Jean Robertson)
Kathy Snuffer	(Kath Siburt)
Beth Graham	(Pam Kroh)
Jane Kump	(Lynne Hamilton)
Nicole Walburn	(Bob Torres)

1:30 - 3:30 p.m.

Lisa Burgess	(Linda Titzell)
Jane Heckert	(Michael Legg)
Rina Jantos	(Cabrini Rudnick)
Lisa Hoerner	(Donna Motter)
Betty Flickinger	(Joan Kelser)
Mary Ann Kolish	(Ray Eichelberger)
Lisa Gaston	(Virginia Truett)
Melissa Perez	(Donna Motter)
Jan Wonders	(Kim Deiter)

JLSP ROSTER

July 26, 1993 - October 1, 1993

East Park Drive

Wednesday - 8:00 a.m. - Noon

Robert Allen	(Dottie Early)
Joy Kerstetter	(Dottie Early)
Yvette Haywood	(Dottie Early)
Iris Klinepeter	(Leann Davinroy)
Althea Duvall	(Larry Kluger)
Tammy Morrett	(Larry Kluger)
Rudy Gornick	(Larry Kluger)

Night Shift

Wednesday - 4:00 - 8:00 p.m.

Lydia Kiddane	(Mike Picioccio)
My Trinh	(Mike Picioccio)
Gloria VanBortel	(Mike Picioccio)
David Snyder	(Mike Picioccio)
Suddir Sha	(Mike Picioccio)
Kimsa Vu	(Kath Siburt)

THE PATRIOT-NEWS JUNE 1, 1992

Grant to target worker literacy at Blue Shield

Skills lacking, top insurer says

By Rhonda Bell
Patriot-News

An alarming number of American workers are entering the workplace without the basic and technical skills to thrive on the job, say officials from the state's largest health insurer. And they want to do something about it — starting right at home.

Pennsylvania Blue Shield, which employs about 6,900 workers statewide, has landed one of more than 50 National Workplace Literacy grants.

The 4-year old program, operated by the U.S. Department of Education, is designed to fund cooperative efforts by corporations and educational institutions to combat illiteracy on the job.

The company, which was granted the only award in the state, will receive $382,053 to use through 1993.

Much of the grant will be used to fund a computer program to educate health-agency workers — a program to be designed by Penn State-Harrisburg's Adult Education Institute. The workers will be trained by representatives from Tri-County Opportunities Industrialization Center.

In seeking the grant, Blue Shield recognized a lack of technical skills in its workers that went beyond job-specific training, a company spokesman said.

"Some people we're seeing didn't have basic skills, the proverbial three R's — reading, writing and 'rithmetic," said Thomas Sommers, Blue Shield's senior vice president of human resources administration.

"We're also asking ourselves: does the individual have appropriate skills to meet the requirements of the technological world?" he said.

On both counts, Sommers said, the answer was a resounding "no."

He said the grant will help the company tackle the problem of literacy on three fronts: on-site computer classes, at-home instruction and traditional job-specific training.

Blue Shield processes more than 300,000 claims each day.

The on-site training is self-paced and will begin in August with eight weeks of bi-weekly classes.

Scheduled for launch in the fall is the take-home computer program, which will allow employees to tote home company laptops and try their hands at programs teaching remedial skills.

Additionally, about 140 Blue Shield employees who never graduated from high school will be urged to participate in the pro-

Combating illiteracy

Pennsylvania Blue Shield is only the third recipient in the state in the National Workplace Literacy fund's four-year history.

- The program was created in 1988 to update the skills of workers to better match their jobs.
- Previously, Penn State and the Pennsylvania Department of Education received grant money — about $1.27 million, much of which went to train unionized truck drivers so they could comply with new federal regulations.
- Nationally, the program has targeted 67,500 workers from 361 businesses since it was launched.

gram. "Students" will be able to challenge themselves to pass grade levels on computer programs, eventually preparing themselves to pass the General Education Test.

"It's really a win-win situation," Sommers said.

"We have a work force that features diverse backgrounds and wildly varying levels of education," he said. "The home-based program will allow individuals to work at their own pace and not worry about individuals alongside of them."

Officials stress that enrollment in any of the initiatives is entirely voluntary. Already, 250 have stepped forward.

"The award here is self-enrichment," Sommers said.

But the benefits aren't limited to the program's graduates. "It's a ripple effect, Sommers said.

"Hopefully, it not only changes their lives but improves their quality of life," he said. "The information is usually passed onto their children. We hope 20 years from now, the effects will still be felt," Sommers said.

The laptop arrangement may also be a boon for working mothers, literacy programs director Donna Cheatham, who has spent the last few weeks visiting companies across the country with similar take-home incentives.

"Our employee base is predominantly female," she said. "Most mothers have other obligations. Taking a laptop home may afford them opportunities they might not have had for another 10 years."

Sommers said Blue Shield shares a problem with the rest of corporate America — finding qualified and educated workers.

But he's not saying who's to blame.

"I'm not into finger pointing," he said.

"We're trying to make sure that we have a qualified work base. We need to address those problems today. We can't wait until tomorrow."

Patriot-News/Mark Resnick

CHANGING WORKERS — Donna Cheatham, Literacy Programs Director, and Thomas Sommers, senior vice president of human resources.

Coverage

June 10, 1992

Updates

Employee Hotline offers help, guidance

If you need to talk to someone about a personal or work-related problem, don't forget that Blue Shield's Employee Hotline is here to help you. By dialing (717) 731-2058 (extension 2058 from most Company phones), you can speak confidentially to an Employee Relations representative. You can use the Hotline to clarify policies or procedures, solicit support and/or guidance for problems, or even to ask about rumors. You may call anonymously, if you wish.

Internal mail for employee claims

If you're a Pennsylvania Blue Shield employee, you have the option of sending your Blue Shield health care

Federal grant targets workplace skills

The Company, together with Penn State University and the Opportunities Industrialization Center (OIC), is using a $382,053 federal grant to help employees upgrade and maintain job-related reading, math and writing skills.

Blue Shield will administer the National Workplace Literacy Program grant. Penn State's Institute for the Study of Adult Literacy will use the money to develop and test instructional software. The software will be used in the Company's workplace literacy program beginning later this summer. The course will be taught with the help of OIC.

The program may also be used as a model for other companies. Blue Shield is one of only 55 groups nationwide (and the only one in Pennsylvania) getting grants in 1992 for workplace literacy projects under the federal program.

"This program will assist in improving the quality of life for those who participate," said Donna Cheatham, recently named director of the Company's workplace literacy programs. "Not only will it enhance the participant's opportunities for career advancement, it will provide personal enrichment as well."

About 200 employees will take part in training sessions, with the first session scheduled to begin in August. Training will

(See Literacy, page 4)

For more information about the Company's workplace skills programs, contact Donna Cheatham, Unit 1-A, Level 1, Center Street, or call (717) 730-8859. All requests will be handled confidentially.

Pride at East Park Drive is key to successes

A lot of people said it just couldn't be done — go from no building, no staff and a bushel full of problems to processing millions of New Jersey's Medicare Part B claims .... in just six months.

And, even when the building at East Park Drive opened and the claims began [illegible] it wasn't

the facility has come a long way," notes Ralph Breindel, director, Medicare Processing - N.J.

Breindel remembers how it started.

In June 1988, Pennsylvania Blue Shield won the New Jersey Medicare contract from Prudential. The agreement called for Blue Shield to start processing Medicare claims on Jan. 1, 1989.

That meant 180 days to find

(See East Park Drive, page 2)

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visits Blue Shield June 11. The van's volunteer health professionals provide health care information to pregnant women in central Pennsylvania and promote the importance of early, regular prenatal care. The van visits East Park Drive from 11:30 a.m. to 12:45 p.m.; Corporate Center, 1:15 to 1:45; Senate Plaza, 2 to 2:30; Center Street 2:45 to 5.

This week marks safety observance

Blue Shield observes National Safety Week June 8-12 at Center Street, Senate Plaza, East Park Drive and Camp Hill Corporate Center. Look for literature, key chains, coloring sheets, safety stickers and other items at displays in the buildings all week.

Olympic items go on sale soon

Blue Shield's Olympic gift program for the Winter Games was a big success -- which is why the merchandise program is making a return appearance for the Summer Games. Watch the Bulletin Boards and Coverage for details of the program, which will feature Olympic clothing and gifts for purchase by employees. It's part of the Company's year-long Olympic celebration.

By far, it's a win-win situation for us and subscribers.

subscribers to call with problems instead of writing.

But what it got — thanks to a team effort — is much more. Not only are the changes to one of Blue Shield's most-used documents improving customer service for Private Business subscribers, they're also saving us $130,000 a year, cutting paper use by 165,000 pages a week, and improving our overall efficiency.

The revisions were made by Private Business Staff Service-Administrative Support, Private Business Information Services, and Forms Development, working together with Customer Service and Public Affairs.

Before the changes, the OSCAR-generated EOB was a two-page form. One page was the reimbursement report. The second was for subscribers to reply, in writing, with questions.

"The redesign's goals were to simplify the EOB and eliminate the subscriber response form," said Dee Hironimus, staff analyst, Private Business Staff Service. Customer Service hoped a simpler EOB would generate fewer inquiries. And, if a subscriber did have a question, Customer Service wanted telephone service emphasized.

Phone service is less expensive. Also, customer satisfaction studies by Blue Shield's Public Affairs area show subscribers are generally happier with telephone results, according to Gino Francavilla, vice president-Customer Service.

Blue Shield added toll-free phone lines last year. Since then, phone inquiries as a percentage of total subscriber inquiries jumped from 60 to 70 percent. Francavilla hopes the new EOB will reduce inquiries and encourage the switch

Medical-surgical inquiries are down since the late March debut of the new form, Francavilla said.

"We don't know for sure if the inquiry drop is a temporary coincidence or a permanent change tied to the new EOB," he said. "We'll continue measuring the impact for another month or two before drawing any conclusions."

On the dollars and cents side, Hironimus said cutting the EOB to

of paper each year.

Customer Service is very pleased with the initial results of the EOB redesign project, Francavilla said.

"The new EOBs are easier to understand. We reduced our paper costs, and we have created an opportunity to migrate some of our written inquiries to more personal telephone service.

"By far, it's a win-win situation for us and the subscribers."

Literacy *(Continued from page 1)*

focus on skills and activities people need to do their jobs and to prepare for future jobs. Course offerings will be tailored for each person according to his or her skill level. The courses will provide computer-based training (CBT) to strengthen reading and writing skills.

The 200 employees will be volunteers. Each will be assessed to determine training needs. Participants will attend four hours of classes each week at Center Street during regular work hours.

Tom Sommers, senior vice president-Human Resources Administration, said the Department of Education grant will help Blue Shield meet both its business and employee development objectives.

"A company succeeds only when it educates its employees," Sommers said. "From an organizational perspective, it makes good business sense to have a workforce that is ready and able to perform in a rapidly changing technological environment.

"I'm convinced that people want to continue their education, but need the necessary resources, guidance and mentoring to fulfill their personal goals."

Blue Shield's interest is part of our response to the federal government's Workforce 2000 study. The study looked at the knowledge and skills required of the workforce in the year 2000. It prompted a similar study by the Company of its own workforce requirements.

Both studies found that workforce literacy training will be more important for workers to meet the challenges of the 21st century.

Coverage is published by Corporate and Public Affairs for Pennsylvania Blue Shield's employees, retirees and their families.

Your comments about Coverage are welcome, as are your ideas. Please call us at (717) 763-6276, or send us a note via E-mail addressed to P157GWM.

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S

DONNA MARIE CHEATHAM
TRAINING & DEVELOPMENT
PBS CAMP HILL
CENTER STREET BLDG 1-A

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Improve your work skills

We are happy to announce the formation of the second in a series of Job Linked Skills Program (JLSP) classes. This on-site program provides you with the opportunity to improve your job-related reading, math and writing skills. The next class begins October 19 and continues through December 24.

Classes meet twice weekly in 2 hour sessions at Center Street during working hours. For greater convenience of our East Shore employees, we plan to begin classes at the Keystone Training Services facility on Derry Street later this year.

The Job Linked Skills Program involves an instructor-led course in basic skills offered on Company time. This program is the result of a partially federally-funded partnership involving Pennsylvania Blue Shield, Penn State's Institute for the Study of Adult Literacy, and the Tri-County Opportunities Industrialization Center (OIC).

The classes focus on the specialized application of basic job skills at Pennsylvania Blue Shield. In addition, classes are tailored to an individual's learning needs.

Interested? To enroll, call Donna Cheatham at extension 8859 or send her a message through interoffice mail at Training and Development, 2B L2. You can also contact Donna Cheatham via e-mail. Attendance will be coordinated with your departmental management. Spaces are limited, so act now. Submit your request by September 25 to allow ample time for scheduling.

Skills program earns employees' kudos

"I can't learn enough . . . There are davs when I wish it was more than two hours long."

That's just one reaction to the Company's new Job Linked Skills Program that is helping employees upgrade and maintain job-related skills.

Here are some others:

"I don't care if you have your master's degree — you're still going to get something out of this program."

"This class is helping me with my job."

"So far, it's going very well. It's going to be very beneficial to me."

These comments came from employees in the first set of classes for the Job Linked Skills Program. Blue Shield was awarded a $382,053 federal grant earlier this year to conduct this program jointly with Penn State University and the Tri-County Opportunities Industrialization Center (OIC).

There are three classes of 10 employees who meet Tuesday and Thursday each week for two hours. The classes run 10 weeks. The next set of classes begins Oct. 19, and runs through Dec. 24. The classes have openings for 60 employees.

Using some commercial and some Penn State-developed software, these 30 employees go through their coursework on personal computers. The classes are facilitated by OIC instructors.

Communications skills — reading, reading comprehension, and language mechanics and expression — are key components of the classwork.

"The software simulates various aspects of the work we handle," said Donna Cheatham, continuing education director, Training and Development. "The courses don't teach you how to do your job — they teach you basic skills to get your job done."

She added, "The students work at their own pace. And, if they hit a snag, the software design allows them to find out more detail about the topic that they're working on."

"I'd recommend the class for anyone who wants to improve their learning skills," said Brenda Garrison, of Dental Claims Analysis. "You work in a small group, the teachers are good and you get one-on-one teaching.

"You can ask a question without feeling stupid. And, if you do have a question — the instructors will work with you until you understand it."

At age 40, Garrison is using this class as a stepping stone. "I'm in the class because I want my high school diploma." She explained that Cheatham has helped her enroll in the next session of the adult high school diploma program at Cumberland Valley high school.

"This is preparing me for my high school studies. I now know what I need to work on," Garrison said.

Donna Forguson, of the Medical Utilization Review's Fraud and Abuse Unit, says the course's sections on English grammar are helping her at work.

"In my work, I write to doctors' offices and speak to their staff. This class is helping with that part of my job."

Another part of the course covers medical terminology. That's a refresher for Forguson, who took a similar class previously. She says the method and approach used in the class makes the material easy to comprehend, and the instructors are great.

Bess Handy, of Beneficiary Services, is also pleased with the refresher in grammar. "I felt that I needed some help in certain areas. I'm working on increasing my reading speed and my comprehension — along with just working on the grammar."

Handy added that her classmates share her enthusiasm for the class. "Everyone wants to learn. We're all trying to better ourselves."

Mark Dively, of Medicare Claims Adjudication, believes that many people could benefit from the program. He's learning more about using a personal computer.

And, he added, "It's nice being the first people through the course. The instructors are learning with us (about the Company)," he said.

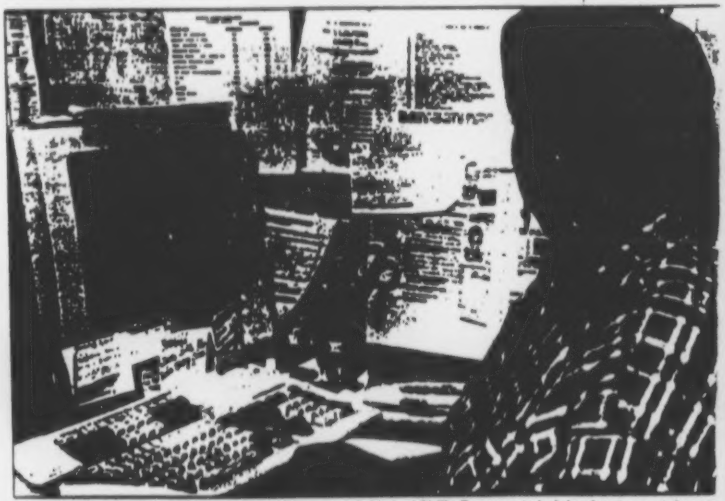
Dively is impressed with the OIC instructors. He described his instructor as "very, very good" and added the instructors are "also very patient."

The Job Linked Skills classes are temporarily being held in The Learning Center, Center Street, Unit 1-A, level 1. The Learning Center is another development program offered by Blue Shield to employees. Cheatham said one of the biggest differences between the two programs is that employees go to the Learning Center primarily on their own time. Classes for Job Linked Skills are always held during work hours.

The Job Linked Skills Program will be getting its own work area in the near future, Cheatham said.

She added that employees interested in signing up for the next set of Job Linked Skills classes, which start Oct. 19, should call her at (717) 730-8859, or send her an electronic mail message or message through internal mail. There are 60 openings for the classes.

Cheatham will contact the department manager of anyone who is interested in the classes, and clear the way for their participation.



Bess Handy, Beneficiary Services, says the new Job Linked Skills Program is helping her to reach her g

Letters From the Editor

HERE'S LOOKIN' AT YOU !!
If you have something to say and would like to express it in the PARROT - Address to Letters to the Editor and place it in the TA Box in your section. We are interested in hearing from you.....Our address is: "THE PARROT"
TA Box #1
MSCATA's Desk
4U2

Take Advantage of the Opportunity to Learn

No matter how old we get, we can always learn new skills. That is why Blue Shield instituted the Job Linked Skills Program.

This program is designed to enable employees to continue learning throughout their careers. Donna Cheatham, Continuing Education Director, said: 'We believe we have a pretty dynamic work force here at Blue Shield. The Job Linked Skills Program (JLSP) is offering the 1st step in a life long learning process.' She believes that this program can be helpful to an employee not just at work, but also in everyday life.

What does the program have to offer? Among other things, JLSP deals in grammar, and reading comprehension, as well as medical terminology, reading and completing forms, and also reading and using reference material.

If a person is interested in advancement, he or she may have to learn to utilize different types of skills. For example: A claims examiner uses the skill of reading and comprehension in order to successfully do the job. But if this same examiner wanted to take a position in the correspondence department, then writing skills would become just as important as reading and comprehension. This is where JLSP would come in handy. The examiner could take a refresher course on writing, and thus be better prepared to perform the new position.

Some employees have expressed the desire to obtain a GED. This course is one avenue that will help them to reach this personal goal. JLSP is offered on company time, for a 10 week period, each session being conducted for two hours twice a week.

Since classes began in August, 1992, over 300 people have expressed an interest in the program. If you are interested, contact Donna at 732-8859. If she is not in, feel free to leave a message on voice mail. Your name will go on a list on a first come first serve basis. Each Manager receives a list of all those interested in their department. Then they determine who and when each one on that list will begin the program based on the work load in the department, along with other factors.

Tom Sommers, Senior Vice President of Human Resources, is excited about this program, and recognizes the need to continually review and analyze the educational needs of Pa. Blue Shield employees.

Currently some of the students are using lap top computers for at home study. This 'distance learning process' will be expanded in 1993 to provide additional PCs to our employees. If anyone has a specific need, or interest that they would like to see on the program, Donna is interested in hearing about it.

So, take advantage of the opportunity to learn, it can help you now, and in the future, at work, or at home.

—Rose Shuff

JLSP
Job Linked
Skills
Program

Evaluation of a Computer-Based Job Related Basic Skills Program

January 1994

Emory J. Brown
Planning, Evaluation & Accountability
634 E. Irvin Avenue
State College, PA 16801

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EVALUATION OF A COMPUTER-BASED JOB-RELATED BASIC SKILLS PROGRAM

EXECUTIVE SUMMARY

Summary

A computer-based workplace literacy project was developed by the Institute for the Study of Adult Literacy (Institute) and tested with employees of Pennsylvania Blue Shield (PA Blue Shield). The curriculum was taught by adult education teachers from the Tri-County Opportunities Industrialization Center (Tri-County O.I.C.). The 18-month project was funded as a National Workplace Literacy Grants Program within the U. S. Department of Education. A partnership of the three major organizations was very instrumental in planning and carrying out the project. An advisory council of PA Blue Shield employees assisted with marketing internally and provided feedback to assist in policy-making. The council and partners met monthly. The advisory council felt satisfied with the role they played even though it was ambiguous at the beginning. They wanted to be more involved in development of the curriculum.

The goal was to develop by computer-based instruction a model job related basic skills program designed to teach PA Blue Shield workers basic skills for successful job performance. A job task analysis was conducted at PA Blue Shield in the claims processing division before writing the scenarios and developing the software program which simulated the workplace environment. The courseware was designed for mid-level readers and included four modules: medical terminology, reading claims forms, clear writing, and using manuals. A teacher's manual accompanied the software.

Teaching was conducted at excellent facilities provided by PA Blue Shield. Workers were given released time. Each class included 40 hours of instruction, approximately 4 hours per week for 10 weeks. Each student had a computer. Teachers used individual and group instruction. They used a variety of print materials to supplement the software.

This was a developmental project, but the teaching began shortly after the grant began and only one module of the software was available for the first class. The teaching covered five 10-week cycles with approximately 50 students per cycle. The computer software was completed in the last cycle of classes.

The evaluation was both formative and summative. Evaluative data were collected from students and teachers during the project to determine whether the course was meeting the planned objectives and the needs of the students. It soon became evident that most students had higher level reading skills than planned. Also, that students wanted more emphasis on writing and grammar. They were highly motivated to develop skills which would enhance their chances for promotion in addition to improving their present job performance. They were oriented to upward mobility. Teachers showed a keen ability to adapt to the needs of the students.

Two hundred and sixty-eight students participated in the classes on a volunteer basis. This number exceeded the original goal. Almost all had completed high school or the equivalent. About 9 out of 10 were female and 2 out of 3 Caucasian. Attendance was excellent and students could make up classes missed. About 400 additional workers signed up for the course. PA Blue Shield is providing them an opportunity to take the course after the grant ended.

The major summative questions were: did the program improve the job-related basic skills of the participating workers and did the increases result in improved job performance? Evidence to deal with these questions came from both qualitative and quantitative data. Students completed tests before and after classes using Tests of Adult Basic Education (TABE), a Criterion-Referenced Test (CRT), an attitude survey, a medical terminology test, and an Everyday Problems Test (EPT). The CRT was not available until the third cycle of classes. The EPT was used only in the first two cycles. Several sources provided evidence about the outcomes of the program through personal interviews: students, teachers, partners, PA Blue Shield advisory council members, and PA Blue Shield supervisors.

On TABE and CRT students showed significant gains in basic skills. Students at all reading levels showed significant gains. The medical terminology test showed exceptional gains. The gains for the EPT were also significant. A control group was available for only the TABE. The changes for boththe treatment and control group were significant; however, the positive changes for the control group were only marginal while the gains of the treatment group were highly significant. TABE measured generic reading and language skills. Teachers used the TABE results for diagnostic purposes, but felt it was not relevant for the content they were teaching. The CRT was a more appropriate test since it was designed to to measure what was taught in the software.

Students completed pre and post attitude questionnaires to determine their satisfactions, their expectations, and perceived benefits. The attitudes of the students showed very little change for most items. A vast majority felt positive about various aspects of the class experience and job-related items before class. Small changes that did occur supported attainment of course objectives. Attitudes about promotion, job performance, and the company changed less than those referring to specific basic skills.

Students expressed a high degree of satisfaction with the course both in the midst of it and at the end. Almost all said they gained in knowledge and skills. They felt a sense of pride in taking the course and perceived support from colleagues and family members. They were somewhat mixed on reactions to the amount of medical terminology taught in the course and many were negative about the reading claims forms module. Most felt they benefited by improving writing skills and increasing knowledge about composition and punctuation. They asked for more materials on writing skills.

Many gave illustrations of how the course improved their job performance by decreasing mistakes, increasing productivity, or decreasing stress. A large number said they increased in self-esteem. Many now have the confidence to seek new educational activities. Some mentioned a better feeling about the company because of giving them this learning opportunity.

Supervisors said they knew quite a bit about the course and fully supported the participation of their workers in it. They felt the workers and PA Blue Shield gained. Some gave illustrations of workers with improved self-confidence, improved chances for promotion, and improved attitudes. One talked about improved work performance, but several said not enough time had elapsed since classes to demonstrate significant changes in work performance.

The partners were all enthusiastic about the project and felt that the project was successful. They felt the software was appropriate for the health insurance industry and it should be disseminated to potential users. All felt the students as well as PA Blue Shield benefited. They felt the goals were attained. They felt the learning gains in basic skills will lead to increased desire for lifelong learning and in the long run will contribute to changed behaviors in the workplace. Students were perceived as gaining in self-esteem and a sense of empowerment. The cooperation among the partners was cited as a key to the success of the project. The support of PA Blue Shield among the administrators, the excellent facilities they provided, and their providing finances for continuation of the classes demonstrate their belief in the value of the Job Linked Skills Program.

Conclusions

- The objectives of the Job Linked Skills program were successfully accomplished.
- The teamwork and effective roles played by the partners were instrumental to the success of the project.
- The adult students gained workplace related basic skills as well as personal development skills.
- The benefits to PA Blue Shield were an improved workforce which will result in more effective job performance.
- The software modules supplemented by print materials will have utility for other workplace or training situations similar to PA Blue Shield.

Recommendations

Since the curriculum to be delivered by computer-based instruction was not completed until near the end of the grant period, the curriculum materials should be further field-tested with the primary target being mid-level reading adults. The Criterion Referenced Test is appropriate for measuring learning gains and should be used for both treatment and control groups. It could be adapted to include more measurement of writing skills. Measurement of more indirect outcomes which impact on job performance would provide necessary data to perform cost-benefit analysis. It is encouraging to know that the PA Blue Shield is considering these recommendations in providing the course to employees who could not participate during the developmental project.

INTRODUCTION

A computer-based workplace literacy project was developed for Pennsylvania Blue Shield employees during the period May 1,1992 to October 31,1993. This is an evaluation report of that project. The project was funded by the United States Department of Education, National Workplace Literacy Grants Program.

The partnership which managed the project included the PA Blue Shield, the Institute, and the Tri-County O.I.C., a community-based adult education organization in Harrisburg, Pennsylvania. PA Blue Shield was the grant recipient.

The goal was to develop by computer-based instruction a job-related basic skills program using the context of claims processing for PA Blue Shield employees. The software was intended to be a comprehensive, industry-centered model program designed to teach PA Blue Shield entry-level workers and trainees the basic skills necessary to succeed in the workplace. PA Blue Shield supervisors had reported a growing need for employees who are flexible, comfortable with new technology, and adept at problem solving. The training program was developed to address those needs and provide the basic skills for employee advancement.

Specifically, the project focused on the basic skills needed in claims preparation and processing. The courseware, which was designed especially for mid-level (grades 5 to 8) readers, is divided into several instructional modules. Module 1 explains how to use the computer and the courseware. The other modules teach the most common basic skills required for the health-care field: reading, writing, and problem solving. Each module is divided into simulated real-life work tasks—such as reading and filling out forms—the student must complete. Students build reading, writing, and problem-solving abilities by doing simulated job assignments.

If students should need additional instruction at anytime during the program, they can request help, including a full lesson, simply by asking. Student progress is tracked on a separate data disk, which allows the instructor to determine the subjects in which the student needs remediation.

The objectives were:

1. To develop a model curriculum to teach by computer-based instruction the required literacy skills for the health insurance industry. Specially designed computer-assisted instruction modules would use the content of the job and training materials for the health insurance industry.
2. To develop screening and assessment instruments.
3. To develop an instructor's manual to accompany the curriculum.
4. To implement the curriculum materials at Pennsylvania Blue Shield on a voluntary basis with at least 200 employees.
5. To evaluate the course in both formative and summative phases.
6. To disseminate the findings and the materials to other potential users.

Development of the Curriculum

The job-related curriculum for basic skills instruction was developed by the Institute at PSU. In order to build the curriculum, the Institute staff conducted literacy task analyses in the PA Blue Shield claims processing division. They interviewed workers, observed employees during their work, and reviewed written materials used by the workers. They identified the basic skills required for the job. The skill requirements were categorized into the Comprehensive Adult Student Assessment System (CASAS) skills. Simulations were designed to incorporate the tasks similar to the job requirements. These simulations required the association of literacy skills to perform hte job tasks. A cross platform authoring system was used to develop the software.

The software included four modules: medical terminology, reading claims forms, clear writing, and using manuals. A teacher's manual was written to guide the instructor through the software. The Institute trained the instructors to use the job-related curriculum and provided technical assistance throughout.

Instructors from Tri-County O.I.C. taught workers from PA Blue Shield using the software developed by the Institute. Teaching started prior to completion of the job analysis and writing of the relevant simulations. After development of a software piece, it was sent to PA Blue Shield for use and review. It was then revised and corrected.

PA Blue Shield, as grant recipient, served as fiscal agent and provided a staff member as project director. They provided the students, the teaching facilities, and equipment, including computers.

The partners met monthly with an advisory council of 15 PA Blue Shield employees. The Council provided two-way communication between the employees and the partners.

Evaluation Plan

The general objective of the project was to improve the workplace basic skills of the workers for improvement in workforce productivity. The major impact related questions are: Did the program improve the job-related basic skills of participating workers and did the increases in basic skills result in improved job performance? Both formative and summative evaluation activities were an integral part from the planning through the implementation stages. The three partners were involved in the total evaluation process. An external evaluator was responsible for evaluation.

Data were collected periodically by interviews with teachers, adult students, and partners to determine perceptions which would help in decision making by all parties (see Evaluation Design figure).

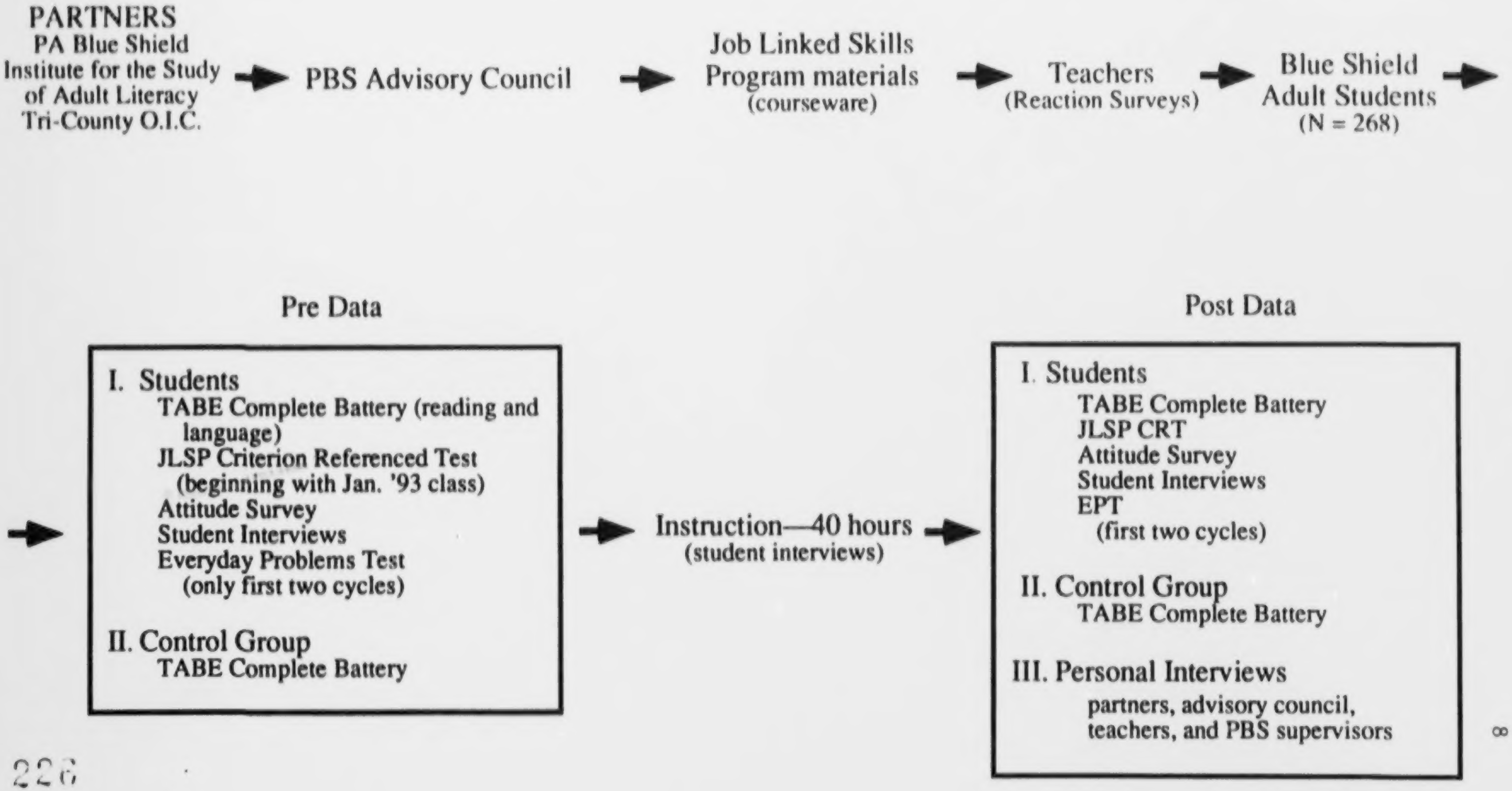
Classes were held in 10-week cycles with instruction given for each student four hours per week at two different sites (40 hours of instruction for each student). Only one class was taught at Keystone Training Center with all others being held at the Camp Hill headquarters. Each class enrolled 10 students at Camp Hill and 7 at Keystone with each student having access to a computer. Students attended class for two hours twice per week at Camp Hill and for four hours once per week at Keystone.

Quantative data were collected by administering tests before and after each class. They included the Tests of Adult Basic Education (TABE), a Criterion Referenced Test (CRT) of 115 multiple choice items designed for this program, a medical terminology test, an Everyday Problems Test (EPT) and an attitude survey.

The CRT included 24 items on reading, 36 on clear writing, 25 on reading forms, and 30 on vocabulary, all written within the context of the health insurance industry. The inter-item reliability was .985 as measured by KR-20 formula.

Evaluation Design for Pennsylvania Blue Shield "Job Linked Skills" Program

May 1, 1992—October 31, 1993



PARTNERS
PA Blue Shield
Institute for the Study of Adult Literacy
Tri-County O.I.C.

→ PBS Advisory Council

→ Job Linked Skills Program materials (courseware)

→ Teachers (Reaction Surveys)

→ Blue Shield Adult Students (N = 268)

→ Pre Data

- I. Students
  - TABE Complete Battery (reading and language)
  - JLSP Criterion Referenced Test (beginning with Jan. '93 class)
  - Attitude Survey
  - Student Interviews
  - Everyday Problems Test (only first two cycles)
- II. Control Group
  - TABE Complete Battery

→ Instruction—40 hours (student interviews)

→ Post Data

- I. Students
  - TABE Complete Battery
  - JLSP CRT
  - Attitude Survey
  - Student Interviews
  - EPT (first two cycles)
- II. Control Group
  - TABE Complete Battery
- III. Personal Interviews
  - partners, advisory council, teachers, and PBS supervisors

The TABE complete Battery Test was used and included the content areas of reading and language. Mathematics was not included since it was not a part of the curriculum.

TABE was administered by a staff member from PA Blue Shield before the classes and by the teachers after the class. The CRT was administered by the teachers pre and post. The attitude survey was also given by the teachers. Teachers administered a medical terminology test before and after class to measure knowledge gain for the vocabulary they taught. An EPT was administered only to the classes of the first two cycles. This test measured life skills. It consists of 84 multiple choice items inherent in food, health, phone, consumer, finance, household, and transportation activities.

In addition, qualitative data were collected from students before, during, and after each class to determine their expectations, their perceived benefits, and extent to which expectations were met. Also, they were asked about attitudes of peer groups toward the classes and the transferability of skills learned to the workplace.

At the end of the project, personal interviews were conducted by the external evaluator with the curriculum developers, the teachers, students, the partners, and PA Blue Shield managers and supervisors. Representatives from the advisory council met with a few classes to collect attitudinal data.

It was originally planned to collect data on worker performance before and after the class on criteria of production, quality, and reliability in order to measure changes in work performance. Students are also being tracked on promotions, job changes, and attendance, but data on the latter and the worker performance are not yet available for this report. Hence, it was not possible to do a cost benefit analysis.

A constructed control group of 35 workers was given the TABE at two points in time, approximately 10 weeks apart. The control group did not take the class and were from the claims processing division, the one in which the job task analysis was done.

FINDINGS

Characteristics of Students

Two hundred and sixty-eight students participated in the classes. Seventy-two percent had completed 12th grade. About 3% had not completed high school (see Table 1). The basic skill level of the students was somewhat higher than the originally planned target group. The age range was 18 to 57 with the modal group being 26 to 33. About 88% were female and 63% were Caucasian. The project was very successful in recruiting students because about 400 signed up who could not be enrolled in the classes during the project period.

PA Blue Shield has continued teaching the course after the external funding terminated. There was a planned attempt to market the course as job linked skills in order to avoid the image of literacy. The few who dropped out of class before completion did so because of job change or illness.

Teaching of the Curriculum

Seven teachers from Tri-County O.I.C. served as instructors for implementing the curriculum. Each class enrolled approximately 10 students with one instructor. Each student had access to a personal computer.

Classes began when only one of the four modules was completed so that the early classes used many supplementary print materials. Teachers continued using various print materials to supplement the software.

Changes Among Students for Everyday Problems Test (EPT)

The Everyday Problems Test was administered by the instructors to the classes in the first two cycles only. It consisted of 84 multiple choice items purported to measure life skills. It was discontinued after the second cycle to decrease the volume of testing, and because it was not as relevant to the objectives of the course as the Criterion Referenced Test. The average raw scores increased from 65.9 to 69.0, a significant change at the .01 level (see Table 2). Sub-scores were computed for food, health, phone, consumer, finance, household, and transportation activities. Gains were recorded for each of the sub-scores with those for food, health, and finance being significant.

Table 1

Student Demographic Data for Pennsylvania Blue Shield Job Linked Skills Program

	Frequency	Percentage
A. Education		
9 grades or less	2	0.8
10 grade	3	1.1
11 grade	4	1.4
12 grade	193	72.0
completed GED	19	7.1
non-English diploma	7	2.6
post high school studies	40	15.0
	268	100.0
B. Age		
18-25	60	22.4
26-33	101	37.7
34-41	52	19.4
42-49	44	16.4
50-57	11	4.1
	268	100.0
C. Sex		
Male	32	11.9
Female	236	88.1
	268	100.0
D. Race		
Asian Americans	21	7.8
African/Black Americans	75	28.0
Latino/Hispanic Americans	3	1.1
Caucasian	169	63.1
	268	100.0

Changes Among Students for the Criterion Referenced Test (CRT)

The CRT was administered by the instructors before and after classes to 127 students. It was not available until January 1993, so that only the classes in the last three cycles took it. It consisted of 115 items with a potential raw score of 115. It was not timed. The test included questions on reading, clear writing, reading forms, and vocabulary. It was designed to measure the extent to which the objectives of the software were accomplished.

The CRT average scores increased from 93.8 to 97.8, a significant change at less than .0001 level (see Tables 3.1 & 3.2). The gains were significant for all three cycles of classes. The scores were relatively high at the beginning, reflecting the high-reading level of most students. The largest gains took place for the grammar and reading items with smaller changes for reading forms and vocabulary. The test was not administered to a control group.

The gains in the CRT were compared to students who took various levels of the TABE as determined by the Locator Form: A (Advanced), D (Difficult), M (Medium), and E (Easy). The students showed significant gains on the CRT for all levels of the TABE except for those taking the Easy Form where there were only seven cases (see Table 4). The gains for this category approached the 5% level of significance. In fact, their raw scores increased more than any other category. Hence, students at all levels of basic skills demonstrated gains in the objectives of the software program. Descriptive data for pre- and posttest change scores for various parts of the CRT are in the appendix.[1]

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[1] See Appendix A for complete statistical summary.

Table 2

PA BLUESHIELD EPT RESULTS
CYCLES I & II (N=83)

PRETESTS

Descriptive Statistics

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
FOOD	10.037	1.771	.197	5.000	12.000
HEALTH	9.728	1.930	.214	3.000	12.000
PHONE	9.222	1.981	.220	2.000	12.000
CONSUMER	8.802	1.792	.199	3.000	11.000
FINANCE	8.642	1.763	.196	3.000	11.000
HOUSEHOLD	10.037	1.900	.211	5.000	12.000
TRANSPORTATION	9.469	2.001	.222	2.000	12.000
TOTAL	65.938	10.549	1.172	27.000	81.000

POSTTESTS

Descriptive Statistics

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
FOOD	10.488	1.484	.164	4.000	12.000
HEALTH	10.207	2.005	.221	3.000	12.000
PHONE	9.537	1.926	.213	3.000	12.000
CONSUMER	9.075	1.741	.195	4.000	11.000
FINANCE	9.370	1.512	.168	2.000	11.000
HOUSEHOLD	10.280	1.680	.185	4.000	12.000
TRANSPORTATION	10.062	1.683	.187	4.000	12.000
TOTAL	69.000	9.416	1.059	34.000	82.000

PA BLUESHIELD
CRT RESULTS
ALL CYCLES N=127

PRETESTS

Descriptive Statistics
Spilt By: Cycle

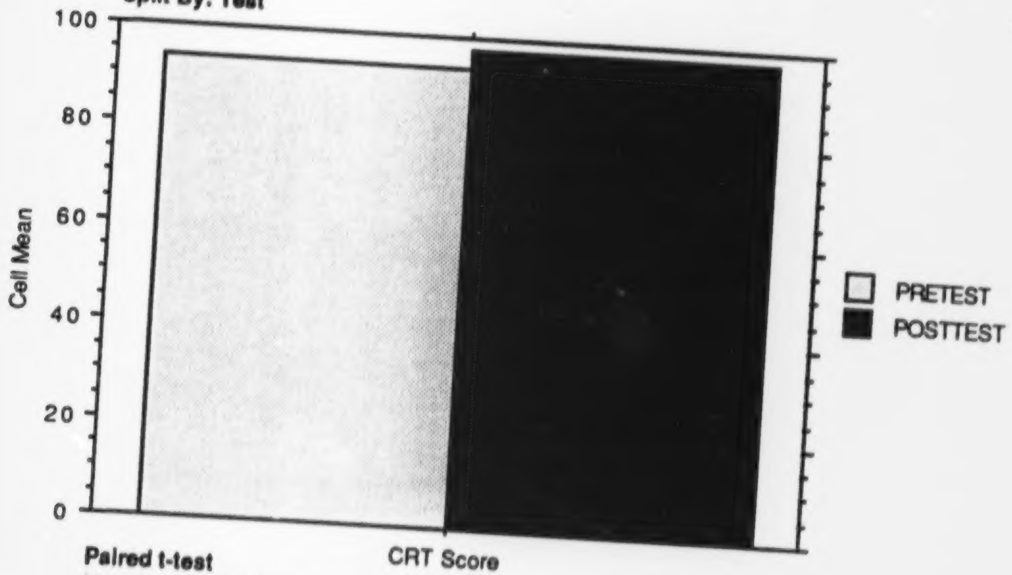
	Mean	Std. Dev.	Std. Error	Minimum	Maximum
CRT Score, Total	93.780	12.663	1.124	43.000	111.000
CRT Score, III	93.219	13.329	2.356	60.000	111.000
CRT Score, IV	95.195	14.036	2.192	43.000	109.000
CRT Score, V	93.037	11.238	1.529	52.000	108.000

POSTTESTS

Descriptive Statistics
Spilt By: Cycle

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
CRT Score, Total	97.811	9.522	.845	50.000	112.000
CRT Score, III	98.781	6.524	1.153	86.000	110.000
CRT Score, IV	98.073	9.231	1.442	60.000	109.000
CRT Score, V	97.037	11.184	1.522	50.000	112.000

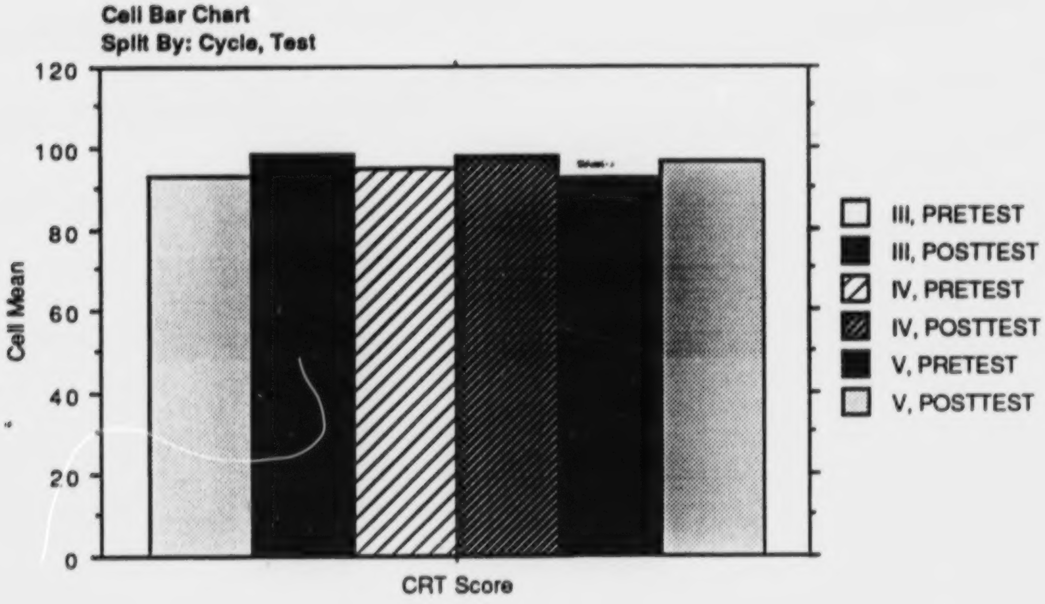
Cell Bar Chart
Spilt By: Test



Paired t-test
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
CRT Score, CRT Score	4.031	126	5.913	<.0001

PA BLUESHIELD
CRT RESULTS BY CYCLE



Paired t-tests
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
CRT Score, CRT Score: Total	4.031	126	5.913	<.0001
CRT Score, CRT Score: III, III	5.562	31	3.326	.0023
CRT Score, CRT Score: IV, IV	2.878	40	2.003	.0520
CRT Score, CRT Score: V, V	4.000	53	6.316	<.0001

Table 4 **Blue Shield Changes in CRT Scores by TABE Locator Level (N = 130)**

TABE Level	Mean Difference	DF	t Value	P Value
Total	**3.8**	**129**	**5.5**	**<.0001**
Advanced	2.3	91	4.0	.0001
Difficult	4.1	18	3.3	.0037
Medium	8.2	11	3.9	.0025
Easy	16.4	6	2.0	.0929

A correlation was computed between CRT and TABE scores for 127 students. The correlation was .873 on pretest and .796 on posttest (see Table 5.1 &5.2). These are high correlations but there are still unexplained differences between the two tests.

Changes Among Students on Vocabulary Test

The instructors developed a medical vocabulary test designed to measure the objectives of what they were teaching. The test was given before and after classes. The average scores increased from 27.9 to 79.3, a highly significant gain for the 72 students for whom scores were available.

Findings From TABE Data

The Tests of Adult Basic Education (TABE) are norm-referenced tests designed to measure achievement in reading, mathematics, language, and spelling. Only the language and reading tests were used in this project. The reading test includes vocabulary and comprehension items; the language test includes mechanics and expression items. The TABE was administered pre and post to 244 students. The Locator Test was used to determine the appropriate level of the TABE to use. Approximately 70% of the students took the advanced level which is estimated at the 8.6 to 12.9 grade range. The average reading scale scores increased from 781 to 786; the language scale scores increased from 737 to 750, both significant. The changes in scale scores for reading was significant at the .056 level and for language at less than .0001 level. On the pretest, the average grade equivalent for scores were 11.2 for

Table 5.1

PA BLUESHIELD
CRT/TABE CORRELATION
PRETESTS-ALL CYCLES N=127

Correlation Matrix

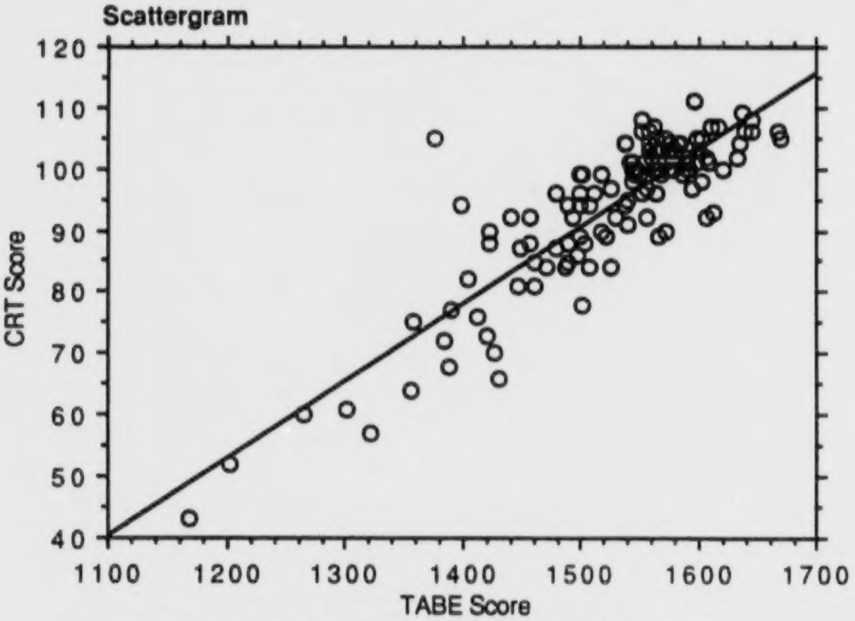
	CRT Score	TABE Score
CRT Score	1.000	.873
TABE Score	.873	1.000

127 observations were used in this computation.

Correlation Analysis

	Correlation	P-Value	95% Lower	95% Upper
CRT Score, TABE Score	.873	<.0001	.824	.909

127 observations were used in this computation.



CRT Score = -97.642 + .126 * TABE Score; R^2 = .762

Table 5.2

BLUESHIELD
CRT/TABE CORRELATION
POSTTESTS N=127

Correlation Matrix

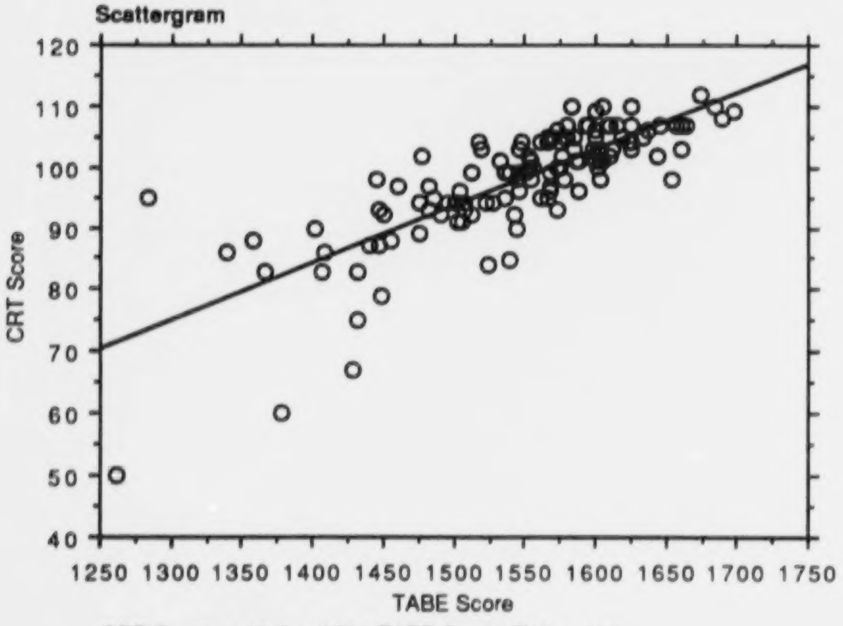
	CRT Score	TABE Score
CRT Score	1.000	.796
TABE Score	.796	1.000

127 observations were used in this computation.

Correlation Analysis

	Correlation	P-Value	95% Lower	95% Upper
CRT Score, TABE Score	.796	<.0001	.722	.852

127 observations were used in this computation.



CRT Score = -45.8 + .093 * TABE Score; R^2 = .633

reading and 9.7 for language, indicating that most students were higher than the 5-8 grade levels for which the program was originally intended (see Table 7.1 & 7.2). The grade equivalents increased to 11.3 for reading and 10.3 for language. Changes in grade equivalency were significant for language but not for reading.

The average pretest scale scores showed little variation among the five cycles of classes. The scores for reading ranged from 773 to 789 and for language from 730 to 743. Posttest scores for reading ranged from 780 to 790 and for language from 742 to 758 (See Appendix B for further statistics.). All scores showed gains for reading and language for all cycles. Gains in language were higher than for reading.

A control group consisted of 35 PA Blue Shield employees who worked in the division where the task analysis was performed and who did not take the course. They took the TABE approximately ten weeks apart so that the elapsed time was similar to the length of classes. The control and treatment groups were not significantly different from each other on the pre- or posttests. In other words, both groups showed gains between the two test administrations. However, the gains of the control group were only marginally significant while the gains of the experimental group were highly significant, especially on the langauge test (see Table 6.1-6.4 for analyses of scale scores). While the TABE is not highly sensitive to workplace literacy instruction, it does show that the treatment group was able to transfer literacy skills gained in the Job Linked Skills Program.

Pre and Post Attitudes of 230 Students

Instructors administered an attitudinal questionnaire before and after classes to measure students' expectations and reactions to the program. They were asked about their perceptions of the overall training, the reactions of their colleagues and families, the influence of the program on their jobs, and the extent to which they improved basic job related skills. Data were available for 230 students. Most questions asked for responses in five categories ranging from "very good" to "bad." No attempt was made to standardize the test although reliability was evidently high because distribution of responses between the cycles of classes was very similar.

About 7 out of 10 felt "very good" about taking the program, both before and after. Only one student felt negative.(see Table 9).

Distributions of how they felt about studying at home changed very little. About one out of four felt "very good" but about one out of three said "okay." Very little homework was required in the classes.

Table 6.1

PA BLUESHIELD TABE RESULTS
TREATMENT X CONTROL
N=35 (PER GROUP)

PRETESTS

Unpaired t-test for R. Tot SS
Grouping Variable: GROUP
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
TREATMENT, CONTROL	-3.114	68	-.406	.6861

Group Info for R. Tot SS
Grouping Variable: GROUP

	Count	Mean	Variance	Std. Dev.	Std. Err
TREATMENT	35	767.257	987.373	31.422	5.311
CONTROL	35	770.371	1072.829	32.754	5.536

Unpaired t-test for L. Tot SS
Grouping Variable: GROUP
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
TREATMENT, CONTROL	3.800	68	.439	.6623

Group Info for L. Tot SS
Grouping Variable: GROUP

	Count	Mean	Variance	Std. Dev.	Std. Err
TREATMENT	35	722.600	1069.953	32.710	5.529
CONTROL	35	718.800	1556.459	39.452	6.669

Table 6.2

PA BLUESHIELD TABE RESULTS
TREATMENT X CONTROL
N=35 (PER GROUP)

POSTTESTS

Unpaired t-test for R. Tot SS
Grouping Variable: GROUP
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
TREATMENT, CONTROL	-4.800	68	-.776	.4406

Group Info for R. Tot SS
Grouping Variable: GROUP

	Count	Mean	Variance	Std. Dev.	Std. Err
TREATMENT	35	777.314	719.516	26.824	4.534
CONTROL	35	782.114	620.398	24.908	4.210

Unpaired t-test for L. Tot SS
Grouping Variable: GROUP
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
TREATMENT, CONTROL	2.029	68	.316	.7533

Group Info for L. Tot SS
Grouping Variable: GROUP

	Count	Mean	Variance	Std. Dev.	Std. Err
TREATMENT	35	733.686	598.869	24.472	4.136
CONTROL	35	731.657	848.055	29.121	4.922

Table 6.3

PA BLUESHIELD TABE RESULTS
TREATMENT X CONTROL
N=35 (PER GROUP)

PRETEST DESCRIPTIVE STATISTICS

CONTROL GROUP

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum
R. Tot SS	770.371	32.754	5.536	35	667.000	806.000
L. Tot SS	718.800	39.452	6.669	35	594.000	774.000

TREATMENT GROUP

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum
R. Tot SS	767.257	31.422	5.311	35	693.000	806.000
L. Tot SS	722.600	32.710	5.529	35	608.000	771.000

POSTTEST DESCRIPTIVE STATISTICS

CONTROL GROUP

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum
R. Tot SS	782.114	24.908	4.210	35	683.000	822.000
L. Tot SS	731.657	29.121	4.922	35	631.000	798.000

TREATMENT GROUP

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum
R. Tot SS	777.314	26.824	4.534	35	694.000	809.000
L. Tot SS	733.686	24.472	4.136	35	663.000	770.000

PAIRED t-tests: HYPOTHESIZED DIFFERENCE = 0

CONTROL GROUP	Mean Diff.	DF	t-Value	P-Value
R. Tot SS, R. Tot SS	11.743	34	2.567	.0148

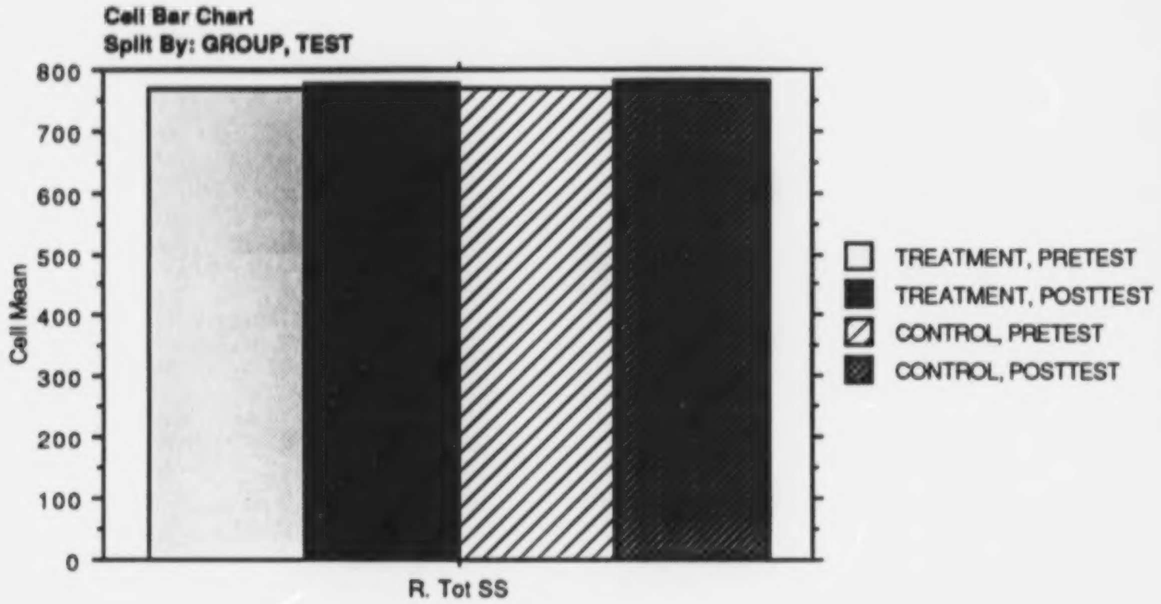
	Mean Diff.	DF	t-Value	P-Value
L. Tot SS, L. Tot SS	12.857	34	2.067	.0464

TREATMENT GROUP	Mean Diff.	DF	t-Value	P-Value
R. Tot SS, R. Tot SS	10.057	34	4.082	.0003

	Mean Diff.	DF	t-Value	P-Value
L. Tot SS, L. Tot SS	11.086	34	3.871	.0005

Table 6.4

PA BLUESHIELD TABE RESULTS
TREATMENT X CONTROL
N=35 (PER GROUP)



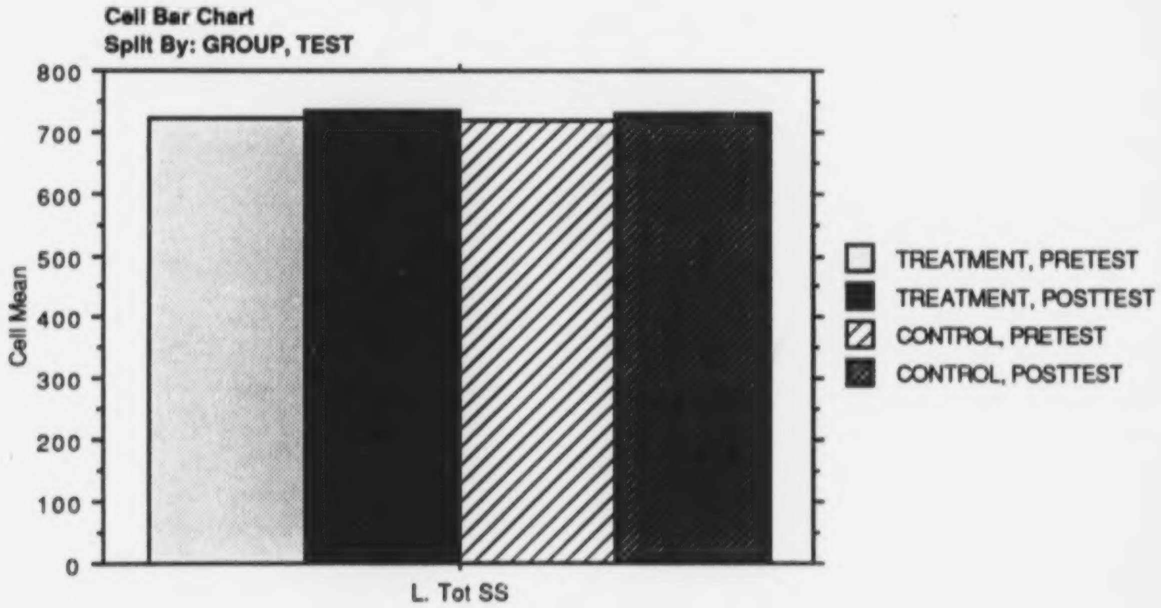


Table 7.1

BLUESHIELD CUMULATIVE CYCLES
TABE PRETEST DATA N=244

Descriptive Statistics

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
[1] R. Voc SS	792.828	58.652	3.755	571.000	865.000
[2] R. Com SS	769.057	38.045	2.436	544.000	823.000
[3] R. Tot SS	781.377	46.667	2.988	580.000	844.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
[4] L. Mec SS	722.664	45.501	2.913	535.000	812.000
[5] L. Exp SS	751.627	55.731	3.568	544.000	885.000
[6] L. Tot SS	737.398	47.903	3.067	552.000	849.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
[7] R. Voc GE	11.092	3.084	.197	2.200	12.980
R.Com GE	11.065	2.796	.179	2.000	12.900
R. Tot GE	11.155	2.943	.188	2.300	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
L. Mec GE	9.194	3.781	.242	.400	12.900
L. Exp GE	10.006	3.531	.226	1.700	12.900
L. Tot GE	9.716	3.594	.230	1.200	12.900

[1] Reading Vocabulary Scale Scores

[2] Reading Comprehension Scale Scores

[3] Reading Total Scale Scores

[4] Language Mechanics Scale Scores

[5] Language Expression Scale Scores

[6] Language Total Scale Scores

[7] GE = grade equivalent

Table 7.2

BLUESHIELD CUMULATIVE CYCLES
TABE POSTTEST DATA N=244

Descriptive Statistics

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
1 R. Voc SS	798.689	55.771	3.570	592.000	961.000
2 R. Com SS	773.520	32.708	2.094	500.000	823.000
3 R. Tot SS	785.955	41.773	2.674	551.000	844.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
4 L. Mec SS	734.988	42.085	2.694	535.000	838.000
5 L. Exp SS	763.971	54.171	3.468	592.000	885.000
6 L. Tot SS	749.693	45.352	2.903	571.000	853.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
7 R. Voc GE	11.289	2.910	.186	2.400	12.900
R.Com GE	11.295	2.606	.167	1.800	12.900
R. Tot GE	11.344	2.730	.175	2.100	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
L. Mec GE	10.015	3.420	.219	.400	12.900
L. Exp GE	10.388	3.272	.209	1.900	12.900
L. Tot GE	10.329	3.258	.209	1.500	12.900

1 Reading Vocabulary Scale Scores
2 Reading Comprehension Scale Scores
3 Reading Total Scale Scores
4 Language Mechanics Scale Scores
5 Language Expression Scale Scores
6 Language Total Scale Scores
7 GE = grade equivalent

Attitudes about using the computer for learning were high at the beginning, and even higher at the end. About 7 out of 10 before the classes and over 8 out of 10 at the end felt "very good" about use of the computer.

Students felt their colleagues supported their taking the training. Very few indicated any disapproval. After the class students were more likely to know how their colleagues felt. Support from family members was also very high, 78% approving it at the beginning and 86% at the end. Very few felt they disapproved.

Attitudes about meeting expectations of job performance changed slightly in the direction of exceeding expectations. About 8 out of 10 at the beginning and 9 out of 10 at the end said they do more than is expected.

Attitudes about getting a better job within PA Blue Shield showed little change. About 60% before and 65% after felt their chances were "good" or "very good." Students were not likely to change their attitudes even though getting a promotion was a major motivating factor in taking the program.

Attitudes about getting a better job outside PA Blue Shield changed slightly in the direction of improving their chances. Whereas about 6 out of 10 felt chances were "good" or "very good" before, slightly over 7 out of 10 felt that way at the end. Attitudes about promotion either within PA Blue Shield or outside were very similar.

Taking the course changed attitudes only slightly about its impact on job performance. Before and after the class bout 8 out of 10 said it would improve their performance.

Satisfaction with working at PA Blue Shield changed very little. About three out of four said they were "satisfied" or "very satisfied" both before and after. Very few indicated negative satisfaction.

Workers were asked what skills they expected from the course and afterwards what they got. Expectations were generally high for all skills with at least one-half wanting improvement in all except math. Over one-half expected improved skills in writing, computer, job performance, and chances of a promotion. When asked in what skills they experienced improvement, a smaller number perceived improved skills in reading, computer, job performance, chances for a better job, math, and problem solving. The number reporting gains in writing and enhancing personal satisfaction increased. The largest number reported not improving in math skills.

Table 9

Pre and Post Attitudes of Students in
Pennsylvania Blue Shield
Job Linked Skills Program
Percentage Distributions; N=230

1. How do/did you feel about taking the JLS program?

	Pre	Post
very good	68.7	69.0
good	24.8	24.5
okay	6.5	6.1
not so good	0.0	0.4
bad	0.0	0.0
Total	100.0	100.0

2. How do/did you feel about studying at home?

	Pre	Post
very	25.6	23.2
good	35.6	32.5
okay	29.6	33.3
not so good	8.3	8.8
bad	0.9	2.2
Total	100.0	100.0

3. How do/did you feel about using the computer for learning?

	Pre	Post
very	70.4	84.8
good	21.7	12.6
okay	7.0	2.2
not so good	0.9	0.4
bad	0.0	0.0
Total	100.0	100.0

4. How do/did your fellow workers feel about your taking this training?

	Pre	Post
approve	40.9	55.5
don't care	14.3	17.0
disapprove	0.9	4.4
I have no idea	43.9	23.1
Total	100.0	100.0

5. How do/did your family members feel about your taking this training?

	Pre	Post
approve	77.7	85.6
don't care	4.8	6.1
disapprove	4.4	1.3
I have no idea	13.1	7.0
Total	100.0	100.0

6. How do/did you feel about your job performance?

	Pre	Post
I give my all	55.6	62.7
I do more than expected	25.7	25.4
I do what is expected	15.2	10.1
I do just enough to get by	2.2	0.9
I do less than is expected	1.3	0.9
Total	100.0	100.0

7a. What are your chances of getting a better job?

	Within Blue Shield	
	Pre	Post
very good	21.6	26.3
good	39.6	39.0
ok	22.9	25.0
not so good	14.1	3.5
bad	1.8	6.2
Total	100.0	100.0

7b.

	Outside Blue Shield	
	Pre	Post
very good	19.7	22.7
good	40.4	49.7
ok	30.0	23.6
not so good	8.4	2.5
bad	1.5	1.5
Total	100.0	100.0

8. To what extent will/has this training affected your job performance?

	Pre	Post
definitely will improve it	40.4	35.7
probably will improve it	41.0	42.7
will not affect my performance	4.3	17.6
I have no idea	14.3	4.0
Total	100.0	100.0

9. How satisfied are you with working at Pennsylvania Blue Shield?

	Pre	Post
very satisfied	29.1	26.6
satisfied	46.5	50.2
so so	21.8	17.5
not satisfied	1.7	3.9
not satisfied at all	0.9	1.8
Total	100.0	100.0

10. What do/did you want to get out of this training?

	Pre	Post
a. learn to read better	57.4	37.4
b. learn to write	69.1	74.7
c. improve my computer skills	63.0	52.8
d. improve my job performance	63.0	43.0
e. improve my chances for a better job	66.5	61.3
f. improve my math skills	44.8	6.1
g. improve my problem solving skills	50.9	21.7
h. enhance personal satisfaction	57.8	64.8
i. other	24.8	9.1
j. I don't know	22.2	1.7

11. How do you rate your performance of these skills?

Poor - 1, Below Average - 2, Average - 3, Very Good - 4, Excellent - 5

		Pre	Post
a. reading			
	Poor	2.7	0.4
	Below Average	13.4	14.2
	Average	37.5	29.7
	Very Good	33.5	37.6
	Excellent	12.9	18.1
Total		100.0	100.0
b. writing			
	Poor	5.8	3.1
	Below Average	18.4	15.9
	Average	51.6	46.0
	Very Good	20.2	29.2
	Excellent	4.0	5.8
	Total	100.0	100.0

c. math

	Pre	Post
Poor	7.4	3.1
Below Average	30.9	16.9
Average	38.2	50.8
Very Good	16.1	21.5
Excellent	7.4	7.7
Total	100.0	100.0

d. using the computer

	Pre	Post
Poor	7.2	3.1
Below Average	26.7	19.1
Average	37.6	38.2
Very Good	23.1	30.2
Excellent	5.4	9.4
Total	100.0	100.0

e. problem solving

	Pre	Post
Poor	3.6	0.0
Below Average	14.1	7.6
Average	49.5	20.4
Very Good	26.4	45.8
Excellent	6.4	26.2
Total	100.0	100.0

f. learning new skills

	Pre	Post
Poor	1.8	0.0
Below Average	8.1	11.1
Average	37.6	36.1
Very Good	38.5	43.5
Excellent	14.0	9.3
Total	100.0	100.0

12. How do you feel about new ideas and change?

	Pre	Post
I'm one of the first to volunteer/accept	76.3	76.7
I volunteer/accept only if others do	14.3	14.4
I'm one of the last to volunteer/accept	4.9	5.8
I never volunteer or get involved unless required	4.5	3.1
Total	100.0	100.0

On a 5-point scale, students were asked to rate themselves on six basic skills. On reading, they showed small gains. The percentage who felt they were "good" or "excellent" increased from 46 to 56. Improvements in writing increased slightly with the percentage saying they were "excellent" or "very good" changing from 24 to 35. About one-half rated themselves as average.

Self-ratings about math skills increased slightly. Students showed positive change in skills of using the computer. The proportion saying they were "excellent" or "very good" went from about 3 out of 10 to 4 out of 10.

Self-ratings on problem-solving skills increased dramatically from about 3 out of 10 to 7 out of 10 as "very good" or "excellent."

Students did not change attitudes about learning new skills. Nor did they change on the extent to which they adopt or accept new ideas or change. Before and after the class about three out of four felt they are one of the first to accept new ideas .

In summary, the distribution of self-reported attitudes for the 230 students changed only slightly as a result of the classes. For most items, their pre-class attitudes were skewed in the direction of expected outcomes of the course, resulting in less chance for positive change. The distributions were J-shaped with a majority being on the positive side. This finding is consistent with most attitudinal studies.

While changes were usually small, they were in the direction of the objectives of the workplace related course. Attitudes about improvement in specific basic skills improved slightly while attitudes about promotion, increase in job performance, attitudes about the company, and predisposition to change showed little or no change. Expectations that these latter, more complex attitudes will change as a result of 40 hours of instruction is highly unrealistic.

INTERVIEW DATA

Assessment of Program by Students

Students provided feedback about the classes at various stages throughout the project. All data were collected by the external evaluator. Seventy-four students completed a questionnaire about midway through the ten weeks of their instruction. In addition, they were interviewed in class after completing the survey forms. At least one class in each of the five cycles was included.

At the end of class instruction, 88 students, slightly over 30% of the total, completed a questionnaire and were interviewed, usually in the class situation. Eighteen students who had completed the class earlier—ranging from two to six months—were interviewed in person. They were asked to provide an evaluation of the course, the benefits to them and to PA Blue Shield, the reactions of their colleagues, and suggestions for improvement. These 18 students were chosen from both the private and Medicare divisions of PA Blue Shield.

Interim Class Reactions

Students were satisfied with the progress of the classes. Classes were challenging, interesting, and enjoyable. They had no major suggestions for changes in the curriculum. They suggested an outline of the course would have been helpful. They identified several bugs in the software which were annoying. They liked the medical terminology, writing, and grammar. They generally wanted more instruction on writing skills and grammar. Several students were not interested in medical terminology since they had it before. However, almost all felt it was important to have knowledge about medical terminology in order to improve their work performance or chances for promotion.

The primary motive of the students seemed to be self-improvement in order to get a promotion. They were interested in learning knowledge and skills required on their job but also for basic skills which cut across other jobs in the company.

The perceived benefits to them included increased knowledge about medical terminology and medical forms, and improving their writing skills and punctuation. They felt they improved their self-esteem and self-confidence. They became more interested and knowledgable about additional educational opportunities. All said the class would help them with their job performance.

Reactions to the stories on medical terminology were mixed with many feeling they were boring and not challenging enough. Others liked them, especially the lower level readers. Several were critical of the module on reading medical claim forms because it required scrolling to answer many of the questions, or they worked with similar forms on the job and were well informed about them.

The students were not as enthusiastic about the clear writing module as expected, since that was a skill most desired. That may be due to the difficulty of correcting writing assignments on a computer.

They liked using the computer for learning. Several indicated the computer learning was superior to their previous experiences in classes taught by the company. They said the computer allowed them to proceed at their own pace; they were not embarrassed by mistakes they made.

The students rated their teachers as excellent. They felt it was very important to have the class on the clock because of conflicts with family responsibilities or other work. All wanted to continuue in the course.

Post Class Reactions

All were positve about their experiences in the classes. They were enthusiastic. They said it was challenging, enjoyable, and helpful. The most important subjects were medical terminology, English grammar, and punctutation. For some, it was a review of previous schooling, but experience gave them confidence that they can still learn. Several said the least important topics were medical terminology and reading medical forms, especially the latter. However, increasing their knowledge of medical terms and improving their grammar and writing skills led to improved job performance, especially in speed and quality, according to many of the students. One low-level male reader hated the class at first but at the end was very enthusiastic about it. He plans to take more courses. Self-esteem was an important outcome. All modules were rated high except the one on reading medical forms.

Several students rated the training superior to what they had previously in the company. They liked the teachers and the relaxed atmosphere which contrasted to the stress many experience on the job. Fellow workers were often interested in the course and many have or will sign up for it. Very little homework was required for which students were grateful.

Several said they want more classes. They wished the course were longer. For almost all students it was necessary to have the class on clock time. All would recommend the class to their colleagues. More writing exercises would be desirable for several.

The students felt the print materials supplement the software. They felt the computer could not stand alone effectively. Depending upon the job, students suggested more writing, math, oral communications, role playing, and dental terminology.

All students interviewed who had several months job experience after the class continue to rate it very high and said it was beneficial to their self-development as well as on the job. Several said there was a direct payoff to the job. They tended to be more specific on sections most relevant to their job. Those who took the classes before all modules were completed would like to take it again. All said classes met their expectations. They felt no literacy stigma attached to the course.

They received support from their colleagues and supervisors for having taken the course. A few gave illustrations of applying for a promotion, saying the class gave them the self-confidence to do it.

Students felt positive about the test taking which required a considerable amount of time. They liked the feedback on how well they did on tests. They also found out more about their strengths and weaknesses. In summary, the responses of the students who had completed the classes were similar to those who were in the process of taking them.

Midpoint Assessment of Program by Teachers

All seven teachers were interviewed during February and March 1993, approximately midway through the project. All had experience in teaching one or more of the classes.

They were all satisfied with the progress of the program and were having positive experiences. Interactions with students were satisfying. The objectives were clear to them. The program was well designed. They felt all students gained in skills and abilities.

They were using a range of print materials to supplement the software, including quizzes and puzzles for medical terminology, and materials for improving writing skills. Students' priorities were focused on materials dealing with writing skills.

The support from PA Blue Shield and the facilities and equipment were rated as excellent. For most students the teachers felt the course would improve job performance.

Teachers felt the students should have more counseling before enrolling to better inform them about the content. Students and teachers expected more materials on writing skills and oral communications and less on medical terminology. In fact, some students showed little interest in medical terminology and claims forms. The medical terminology module was considered boring for many students. Teachers cited several errors in the software which should be eliminated. The TABE was not considered an appropriate test for what was being taught.

Post Assessment of Program by Teachers

All seven teachers were personally interviewed at the end of the project. They were asked about their overall reactions to the program, the benefits to students and PA Blue Shield, the computer software materials, methods of teaching, and the use of supplementary print materials.

Overall reactions were positive by all teachers. They felt the program was successful and both students and PA Blue Shield gained benefits. The most satisfaction to the teachers was seeing improvement on the part of the students in basic skills and self-confidence. They felt the needs of the students were met. The teachers felt the students improved in job skills, self-esteem, desire for more education, and ability to learn. Some students were motivated to get their GED or work on a degree. The students were perceived as gaining in English grammar and writing skills, knowledge of medical terminology, computer skills, and skills required in everyday living, especially writing, and self-confidence. Teachers said students increased their chances for promotion or job changes. Students became aware of other parts of the organization and developed relationships with other workers. Teachers felt all students improved in some capacity.

PA Blue Shield benefited because the student workers became more interested in learning, and they developed more favorable attitudes toward PA Blue Shield. They also improved skills in use of the computer. The teachers felt the job performance of workers will increase as a result of increasing their skills in writing and knowledge of medical terminology and reading forms. These improvements should show up first in quality of work.

The major dissatisfaction was the errors and glitches in the software. They all wanted more materials on writing and grammar skills than were included in the early modules. The Medical Terminology Module was considered too easy for most of the students in the program. They were critical of the reading claim form module.

Overall, the teachers were generally satisfied with the software modules. They provided a framework for the course. Teachers were very positive about the overall format of the curriculum. They were critical of the errors and glitches not being corrected as quickly as they expected. The reading claim form module presented the forms on two or more screens which was awkward to the teachers and students. The Medical Terminology Module could have been improved especially for the higher level readers.

In the early classes, teachers did not know what modules would be developed later but they quickly adapted to the needs of the students by using other teaching materials. They would have benefited by having an outline of the course for themselves and students.

All teachers used a combination of individual and group teaching. Students worked alone or in pairs at the computer at their own pace. Group teaching was used for review and discussion of quizzes. Teachers generally felt two hours at the computer was not as effective as a combination of individual and group teaching. Each student had an individual evaluation plan. Attendance of the students was excellent. They were permitted to make up missed classes. Teachers assigned very little homework.

Teachers used a variety of print materials to supplement the computer software; some were developed by the teachers and others were commercial materials. For example, teachers developed a booklet which included 366 medical terminology words, a syllabified medical terminology word list, medical word parts quizzes, and medical terminology crossword puzzles. They used medical language file cards for the 366 words. Several commercial books were used to teach punctuation, grammar, and general writing skills. Selected workplace materials were used.

Teachers were very satisfied with the mix of high and lower level readers and with workers from various job positions. The support from PA Blue Shield, the computer equipment, and physical environment were rated excellent.

Recommendations of the teachers included more software on grammar and writing skills, use of supplementary print materials, use of a variety of delivery methods, recruit more lower level readers, clean up the software, and increase communications between the curriculum developers and the teachers.

Assessment of Program by Pennsylvania Blue Shield Supervisors

Six supervisors were personally interviewed to obtain their perceptions of the program and how it affected the workers whom they supervised. They were well informed about the program. Two referred to a meeting with the PA Blue Shield coordinator. Most heard about it from workers they supervised. Their image of the class was positive.

Most had three or four employees in the program but one had 15. All except one said the employees volunteered without their involvement.

All wholeheartedly supported the program. One said he was flexible and encouraged workers to make up missed classes. One expressed the need to plan so that participation in class did not interfere with production. They felt the results would be beneficial to the workers and PA Blue Shield.

Supervisors expectations of the workers who took the program included increased self-confidence, a more positive attitude, feeling better about the company, increased reading skills, improved decision making, and personal improvement. All had expectations which would help the worker as well as PA Blue Shield.

All reported a positive outcome in terms of what they expected. They cited improved writing skills and increased chances for mobility. They were very positive about the outcomes. Two mentioned employees who received promotions. One said quality of performance has improved, and another said the short time since the class does not permit changes in job performance. Overall feedback from the students was favorable. Employees feel better towards the organization. The company knows more about the workers.

Assessment by Pennsylvania Blue Shield Employees Who Served on Advisory Council

The Advisory Council was established to assure that the proposed training would address employees' perceived needs and interests. It was expected to help with development of approaches to recruitment and advertising. Members were expected to explain the program and provide positive support. The message to workers was that the program would upgrade basic skills enabling them to be more productive, and it would assist them in dealing more easily with new technology and improve their potential for upward mobility within the company. Council members were told they were the nucleus of the workforce and their thoughts and ideas were important. Fifteen employees served on the

Council from various divisions of the company. The PA Blue Shield project director served as chair.

The Advisory Council met approximately once a month to facilitate communication among the partners, to review progress of the program and to provide a forum for evaluation and recommendations for needed changes. A few Council members met with classes for feedback. Council members helped with events to market the program.

At the last meeting of the Council, the members completed a questionnaire and were interviewed in a group situation. Eight participated in the evaluation.

All felt the program was successful with one saying it was very successful. They based their judgments on feedback from students who reported a positive experience. Negative reactions were very limited with the main one being a desire for more specific training to fit their present job situation. Benefits to students were reported as increased self-esteem and self-confidence, increased desire for more education, improved skills related to the job, and reviewing much information which had been forgotten. Council members felt higher level skilled workers gained from the course even though it was geared for lower levels. At the same time council members voiced a concern about not reaching many workers who should be in the classes. They felt the image of literacy still existed about the course even though steps were taken to project the class otherwise.

Benefits to PA Blue Shield were better educated employees which helped PA Blue Shield become more competitive in the work environment, employees with better attitudes toward their job and PA Blue Shield, improved skills of employees, and more reliable and assertive workers, all of which contribute to improved production.

They felt rather well informed about the program and generally rated the Council as being helpful. They varied on how satisfied they were with the role they played. Personal gains included learning more about PA Blue Shield policies with respect to education and knowing they had a part in a successful program.

Even though they were expected to help market the program, they were not sure of their role in the early meetings and felt somewhat frustrated. Over time they felt more comfortable with their role as they learned about the program and realized they were expected to communicate their ideas and opinions. They felt they should have been more involved in the development of the software and curriculum, even though some of them helped review the software. Suggestions for improvement were for them to be more involved with the program and that they be more assertive in expressing their opinions.

Assessment of Program by Partners

The Director of the Institute, the Director of Tri-County O.I.C., and four staff members from PA Blue Shield, including the Job Linked Skills Project Director, the Director of Training and Development, the Director of Training, and the coordinator of the follow-up teaching at PA Blue Shield were personally interviewed by the external evaluator at the end of the project.

All were enthusiastic about the project and felt that it was successful. They said the project went smoothly and the goals were met. The original goals were accomplished, especially with regard to numbers. The curriculum was developed and delivered as planned. PA Blue Shield staff felt both quantitative and qualitative results were favorable. For most, the expectations were exceeded. The major benefits to the students were learning basic skills for life long learning. There were immediate learning gains which should lead to further long range gains in worker productivity, attitudes, promotions, attendance, and quality of work. Also, the learning experiences should lead to increased desire for more education. Students were seen as increasing in self-esteem and confidence with an increased sense of empowerment.

All felt PA Blue Shield benefited from the program by having employees with increased basic skills in the health insurance industry and improved attitudes about their work and organization. Worker productivity in quantity, quality, and reliability will increase. Chances for promotion will increase as a result.

One criterion of success was the large number of employees who signed up for the program. Almost 10% of the total workforce signed up for the course. Over 400 could not be included in classes during the grant period, but will be given the course after the grant ends.

The partners' group was considered a key to the overall success of the program. It was well administered and the cooperation among the partners was excellent. PA Blue Shield rated the teachers as excellent. The teachers developed supplementary teaching materials to support the software and provided appropriate teaching early on when all modules had not yet been developed. The software program developed by the Institute was rated as being of high quality. Work done by all partners was cited as superb. PA Blue Shield felt value was added by going outside their organization. The leadership of the project director was outstanding. PA Blue Shield played a major contributing role by providing excellent facilities, support from management, and an effective advisory council which helped with recruiting students and reviewing the software.

Partners recommend that the curriculum be disseminated to other potential users. Most felt the computer software could not stand alone for the targeted audience of those employees reading at the 5th- to 8th-grade levels. Some said supplementary printed materials should be a part of the package.

It could be used by other organizations in the health insurance industry as well as community colleges, job training centers, etc.

Partners cited a difficulty with the Federal requirement that teaching begin 90 days after the project began. It was not possible to have the software curriculum completed before classes began. In fact, the last module was completed near the end of the contract period. Hence, the teachers did not have the complete package of software for most of the classes.

To some it was a disappointment that the lower level readers were not reached as planned. However, a greater proportion of the lower level readers were enrolled as the teaching progressed. The program was marketed very successfully within PA Blue Shield as a job skills course so that the negative image of literacy did not surface as much as it might have. It was a trade off to offer the course on a volunteer basis to any employee who was interested.

Assessment of Program by Institute Staff

Personal interviews were conducted with staff responsible for developing the curriculum and computer software. The staff felt the internal teamwork and cooperation with the external partners were instrumental in producing the software materials. They cited excellent cooperation with PA Blue Shield in conducting the literacy task analysis. Access to employees and company print materials provided the necessary data for identifying basic skills required for the job and developing job simulations.

The staff depended upon feedback from PA Blue Shield and the instructors for field-testing the software. While this process was generally effective in identifying procedural malfunctions, it was not always as timely as desired. They felt delays in editing and debugging the software could have been alleviated by planned, systematic communications with the instructors and PA Blue Shield staff. The Institute staff were cognizant of student complaints about the module on reading forms, but scrolling was technically necessary to see the total form on the screen. The staff were satisfied that the software was properly edited.

Training of instructors and providing them with technical assistance were adequate and satisfactory.

The staff felt the software should be supplemented with print materials, especially the module on clear writing. Some of the modules could stand alone.

Staff rated the curriculum software to be of high quality and excellent for the target audience. Health insurance agencies and similar organizations performing extensive paper processing were seen as relevant targets for marketing the curriculum.

APPENDIX A

INSTRUMENTS

Pennsylvania Blue Shield

Post Class Student Interview Guide
November, 1992

1. What is your overall reaction to the class you have just completed?

2. What was of most benefit to you? Why?

3. What was of least benefit to you? Why?

4. How well did the class meet your expectations?

5. How did your fellow workers feel about your taking the class?

6. How will what you have learned help you in your job?

7. Has your supervisor change expectations of you as a result of this class?

8 Please evaluate each of the following areas you had in class:

    Word attack

    Medical terminology

    Reading medical forms

9. Are you interested in continuing in this class? Why?

10. Would you recommend this class to your colleagues? Why?

11. How important was it that the class be held on clock time?

12. Other comments:

Pennsylvania Blue Shield
"Job Linked Skills Program"

Interim Class Student Interview Guide
June, 1993

1. What is your overall reaction to the class so far?

2. What is of most benefit to you? Why?

3. What is of least benefit to you? Why?

4. How well is the class meeting your expectations?

5. How do your fellow workers feel about your taking the class?

6. How will what you are learning help you in your job?

7. Has your supervisor changed expectations of you as a result of this class?

8 Please evaluate each of the following areas you have had in class:

    Word attack

    Medical terminology

    Reading medical forms

    Clear Writing

9. Are you interested in continuing in this class? Why?

10. Would you recommend this class to your colleagues? Why?

11. How important was it that the class be held on clock time?

12. Other comments:

Pennsylvania Blue Shield
"Legacy of Caring"
Pre Class Student Interview Guide
May, 1993

Name: ______________________________

1. What is your job responsibility?
2. What educational skills or knowledge would be of most help to you in your job performance?
3. What do you expect from the class?
4. How did you hear about the class?
5. Did you volunteer?
6. Additional comments:

Interview Guide for Instructors
PA Blue Shield's Job Linked Skills Program

October 1993

1. How satisfied are you with the overall program?

2. How successful was the program?

3. What were the benefits for the students?

4. What were the benefits for Blue Shield?

5. What were most and least satisfying?

6. To what extent did the program meet the needs of the students and Blue Shield?

7. What teaching methods and styles did you use?

8. Please evaluate the software.

9. What other teaching materials did you use?

10. What changes would you suggest in the program as it continues?

Pennsylvania Blue Shield
"Job Linked Skills Program"

Advisory Council Terminal Survey
October 1993

1. Your position ____.

2. How successful do you feel the program has been?
   - __ very
   - __ quite
   - __ so - so
   - __ not very
   - __ not at all

   Why do you feel that way?

3. What has been the major benefit
   (a) to the students?

   (b) to PBS?

4. What do you feel was the goal(s) of the program?

5. How well informed were you about the program?
   - __ very well
   - __ quite well
   - __ so - so
   - __ not very well
   - __ not well at all

6. How helpful was the Advisory Council?

__ very
__ quite a bit
__ some
__ not much
__ not at all

7. How did the Advisory Council help the program?

8 How satisfied were you with the role played by the Advisory Council?

__ very
__ quite a bit
__ some
__ not very
__ not at all

9. What benefit did you get from serving on the Council?

10. If this program were repeated elsewhere, what suggestions do you have for having an effective Advisory Committee?

PARTNERS' INTERVIEW GUIDE FOR PENNSYLVANIA BLUE SHIELD JOB LINKED SKILLS PROGRAM

December 1993

Name: ________________________________

1. What is your overall assessment of the Job Linked Skills Program?

2. What do you feel are the major benefits or outcomes? For the students, PA Blue Shield, and others?

3. To what extent will the program affect job performance?

4. What do you feel are the major disappointments?

5 How well were the original goals accomplished? Were any of the original goals changed or were new ones added?

6. What factors helped with development and delivery of the project?

7. What factors hindered development and delivery of the project?

8. Please evaluate the role played by each partner:
   Blue Shield

   Tri-County O.I.C.

   Institute for the Study of Adult Literacy

9. How well did the curriculum meet the needs of the employees?

10. How satisfied are you with the software and print materials used in teaching?

11. How satisfied are you with the overall fiscal arrangements?

12. Would you recommend this program be disseminated and adopted by other users? If yes, what changes or modifications would you suggest?

INTERVIEW GUIDE FOR PENNSYLVANIA BLUE SHIELD SUPERVISORS AND MANAGERS JOB LINKED SKILLS PROGRAM

October 1993

Name ______________________________________

Position ___________________________________

1. How well informed were you about the Job Linked Skills Program?

2. How many of the students with whom you work were in the program?

3. Did you recommend these employees for the program?

4. To what extent did you support and approve of their participation?

5. What did you expect from the program?

6. To what extent were your expectations fulfilled?

7. Did you observe any changes in the job performance of the students?

8. Did you observe any other changes in the students?

9. How did this program compare with others offered by the learning center or the company

10. Would you recommend this program to other supervisors or managers in Blue Shield?

Medical Terminology - Post-Test

Name: ____________________ Class Time: ________ Date: ________

PREFIXES, SUFFIXES AND ROOT WORDS

Directions: Define the following:

gastro ____________________

gynec/o ____________________

logist ____________________

meter ____________________

anti ____________________

hemi ____________________

dactyl ____________________

scopy ____________________

meningi/o ____________________

myel/o ____________________

pod/o ____________________

burs/a ____________________

brady ____________________

edema ____________________

oma ____________________

natal ____________________

malacia ____________________

algia ____________________

ectomy ____________________

hep/a/to ____________________

andr/o ____________________

path/y ____________________

pedia ____________________

sono ____________________

bi ____________________

plegia ____________________

trans ____________________

hyper ____________________

crani/o ____________________

encephal/o ____________________

pulmon/o ____________________

genic ____________________

cost/o ____________________

oste/o ____________________

tachy ____________________

pre ____________________

itis ____________________

rhin/o ____________________

medial ____________________

neph ____________________

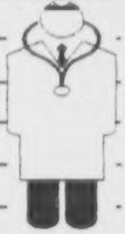
MATCHING

_____	hyperdactylia	A. failure of the liver to work
_____	hypoesthesia	B. abnormal increase in the size of teeth
_____	hypostosis	C. within the skull
_____	abdominal	D. something that neutralizes a poison
_____	hypodermic	E. having too many fingers or toes
_____	antineuralgic	F. disease of the brain or head
_____	macrocephaly	G. between the ribs
_____	bradycardia	H. born with one or both eyes missing
_____	myalgia	I. decreased sensitivity to pain
_____	cervicitis	J. in the belly
_____	antiseptic	K. relieving pain along a nerve
_____	intercostal	L. lack of development of the bone
_____	anophthalmia	M. slow heart beat
_____	macroscopic	N. under the skin
_____	cardiohepatic	O. something that kills bacteria & other disease causing organisms
_____	microdactylia	P. pain in a muscle
_____	cephalopathy	Q. abnormally large head
_____	androgynous	R. inflammation of the neck of the uterus
_____	macrodontia	S. large enough to be examined with the naked eye
_____	antitoxin	T. unusually small toes and fingers
_____	lateroabdominal	U. without sexual characteristics of men or women
_____	audiologist	V. within a vein
_____	intracranial	W. having to do with the heart and liver together
_____	intravenous	X. specialist in hearing problems
_____	anheptia	Y. having to do with the side of the body and the abdominal area

DEFINITIONS

Directions: Write a brief definition

1. craniomalacia ____________________
2. myomalacia ____________________
3. dermascopy ____________________
4. myelitis ____________________
5. craniotomy ____________________
6. myelosclerosis ____________________
7. dermatotherapy ____________________
8. febriphobia ____________________
9. myometer ____________________
10. nephralgia ____________________
11. oncotherapy ____________________
12. encephalalgia ____________________
13. disease ____________________
14. ophthalmitis ____________________
15. encephalogram ____________________
16. gastrologist ____________________
17. neurocranium ____________________
18. gastroplegia ____________________
19. neuropathy ____________________
20. otitis ____________________
21. androphobia ____________________
22. hepatoma ____________________
23. ostalgia ____________________
24. pathogen ____________________
25. pediatrician ____________________
26. pathologist ____________________
27. gyneophobia ____________________
28. polyneuropathy ____________________
29. pseudoesthesia ____________________
30. quadriplegia ____________________



Write a definition on the blank line next to the medical term.

androgynous ____________________

cardionephric ____________________

neuritis ____________________

oncologist ____________________

arthrectomy ____________________

pharnacology ____________________

audiometer ____________________

intravenous ____________________

cardioplegia ____________________

hemilingual ____________________

PART I. READING

READING #1

DIRECTIONS: Read the following paragraphs. Answer the questions at the end. You can look back and read the paragraphs again to answer the questions.

Cosmetic surgery improves an individual's appearance. Medical insurance usually will not pay for cosmetic surgery. Reconstructive surgery is different. It improves the way the body works. Medical insurance will usually pay for reconstructive surgery.

Corrective facial surgery is cosmetic when it does not improve the way the body works.

Medical insurance does not pay for corrective facial surgery if a person has psychiatric problems, but functions normally. A severe psychological problem can be a "significant functional impairment." A psychiatrist must state that there is a severe psychological impairment. The company will consider each case individually.

In cases involving psychiatric disorder due to aging, a psychiatrist should send a report with the claim. The report must state that a psychiatric condition relates to the condition the surgery corrects. The report should also state that the surgery will help the psychiatric problem a great deal. A staff medical doctor decides if the insurance will pay for these services.

The attached guidelines (Categories A & B) list some common types of cosmetic or reconstructive surgery. Use these guidelines to determine if procedures are cosmetic or reconstructive. Other cosmetic or reconstructive procedures exist. Review these cases individually. Decide that they are reconstructive surgery only when functional impairment is documented.

Cosmetic surgery can be covered if it corrects a problem that happened because of an accident. The accident must have happened when the insurance was in effect. The patient must have had surgery when the insurance was in effect. The insurance must have been in effect all the time between the accident and the surgery.

1. Who decides if insurance will pay for corrective facial surgery in cases of a psychiatric disorder due to aging?

    A. A psychiatrist
    B. A staff medical doctor
    C. The insured
    D. The analyst

2. An insured has cosmetic surgery to correct a problem caused by an accident. He had coverage at the time of the accident. He had coverage at the time of the surgery. He did not have coverage for one month between the time of the accident and the time of the surgery. Will the insurance pay for the surgery?

    A. Yes
    B. No
    C. This is decided on a case by case basis
    D. Yes, if there is a psychiatrist's report

3. A young woman has a large nose. She is extremely unhappy about her appearance. She has tried to kill herself about the way she looks. She sends in a psychiatric report stating that she has a significant functional impairment. Will insurance pay for cosmetic surgery on her nose?

    A. Yes
    B. No
    C. This is decided on a case by case basis
    D. Only after an interview with the insured

4. An insured has reconstructive surgery to repair functional damage caused by cancer surgery. Will insurance pay for the surgery?

    A. Yes
    B. No
    C. This is decided on a case by case basis
    D. Yes, if there is a psychiatrist's report

5. What does cosmetic facial surgery do?

    A. Improves the way the body works
    B. Improves an individual's appearance
    C. Restores organs lost to cancer
    D. Improves the use of a limb

6. Can a severe psychiatric problem ever be considered a severe functional impairment?

   A. Yes
   B. No
   C. The reading does not say

READING #2

DIRECTIONS: Read the following paragraphs. Answer the questions at the end. You can look back and read the paragraphs again to answer the questions.

Hematology is the study of blood. The average adult has approximately 5 to 6 quarts of blood.

Plasma makes up about 55 percent of the blood. It is a clear yellow liquid. Blood cells and formed elements are suspended in the plasma.

The remaining 45 percent of the blood consists of the formed elements. These are red blood cells, white blood cells, and platelets.

There are many different types of blood tests. Blood comes from two sources for most routine blood tests. The first source is capillary or peripheral blood. This blood is taken from the fingertip. For other tests, blood is taken from a vein. This is called venous blood. Taking blood from a vein is called "venipuncture." The most common site for venipuncture is the inner part of the arm opposite the elbow. Other sites can be used, however. Blood can be taken from the veins in the top of the hand, in the wrist, or even in the foot. In extreme cases, blood may be taken form the femoral vein, found in the thigh. Blood can be taken from the femoral vein only by physicians.

Sometimes special blood studies, such as blood gases, will be performed. In these cases, blood is taken from an artery instead of a vein. For example, a physician might need to know how much oxygen is in the blood of an emphysema patient who has an acute episode of shortness of breath. The physician would take blood from an artery before and after administering oxygen and compare the two. This way, the physician could see if more oxygen is in the patient's blood.

1. Most of the blood is:

   A. Red blood cells
   B. White blood cells
   C. Plasma
   D. Platelets

2. A physician wants to know how much oxygen a patient has in his blood. Where would the blood be taken?

   A. An artery
   B. A vein
   C. The finger tip
   D. The inner part of the arm

3. A person has lost 1/2 of his blood after an accident. How much blood has he lost?

   A. About 1 quart
   B. About 2 1/2 quarts
   C. About 10 quarts
   D. About 6 quarts

4. Which of the following is a gas found in the blood?

   A. Oxygen
   B. Lead
   C. Blood cells
   D. Plasma

5. What is the most common site for venipuncture?

   A. The top of the foot
   B. The underside of the hand
   C. The inner part of the arm
   D. The inner part of the wrist

6. Peripheral blood is taken from:

   A. A capillary
   B. A vein
   C. An artery
   D. A large blood vessel

READING #3

DIRECTIONS: Read the following paragraphs. Answer the questions at the end. You can look back and read the paragraphs again to answer the questions.

SICK LEAVE

Regular employees accumulate one sick leave day with pay for each calendar month in which they have worked for at least eleven days.

Employees can take sick leave only when they cannot perform their duties because of illness or injury or if they have appointments with doctors, dentists, optometrists, or hospitals. Employees should try to schedule these appointments on their own time. If they must make appointments during work hours, the time off work counts as sick leave. Employees should request time off for appointments as far in advance as possible. These appointments usually last less than a half-day and employees must return to the job immediately after the appointment is over. Supervisors may ask employees for written statements from the persons with whom employees had appointments.

VACATION

Employees should schedule their vacation with permission of their supervisors. Only days on which employees normally would have worked count against their vacation allowance.

Employees accumulate vacation according to the following schedule:

Length of Employment	Monthly Rate of Accumulation	Maximum Accumulation Allowed
Under 10 years	1 1/2	24 days
10 to 24 years	2	30 days
25 years or more	2 1/4	33 days

1. December 25 is a holiday. Jon does not come to work. Does this count as a vacation day?

   A. Yes
   B. No
   C. The reading does not say
   D. It counts as a sick day

2. Florence has worked at the company for 17 years. How many vacation days does she accumulate during twelve months of work?

   A. 6
   B. 12
   C. 18
   D. 24

3. How many sick days does Florence get in one year?

   A. 6
   B. 12
   C. 18
   D. 24

4. Jose was out of work all November because he had surgery. Does he accumulate any sick leave during November?

   A. Yes
   B. No
   C. You can't tell from the reading

5. Frederick has worked for the company for 32 years. He has accumulated 33 days of vacation. Can he accumulate any more days?

   A. Yes
   B. No
   C. You can't tell from the reading

6. Laura has to go to the dentist during the day. The dentist appointment takes Laura away from work for 4 hours. She has 2 sick days left and 6 vacation days left. What should she use for her appointment?

   A. 1 sick day
   B. 1/2 sick day
   C. 1 vacation day
   D. 1/2 vacation day

READING #4

DIRECTIONS: Read the following paragraphs. Answer the questions at the end. You can look back and read the paragraphs again to answer the questions.

MEMO

TO: All staff

FROM: Debbie Herbert, Environmental Manager

Date: January 8, 1993

Subject: Recycling

Effective immediately, there are changes in the company recycling program. Starting today, please place white paper, including copy paper and writing tablet paper, in the recycling tray you have in your office. Do not place any other type of paper in this tray. Place computer print out paper in the special recycling bin on each floor. Do not recycle computer paper with green lines. Break down corrugated cardboard boxes and leave them at your desk. The janitor will pick them up at night.

Be sure to remove all post-it notes, paper clips, and staples before recycling paper.

Follow these steps to recycle aluminum, bimetal, and steel cans and glass containers: (1) remove material left in the can; (2) rinse with water; and (3) place the containers in the proper bin.

Do not recycle the following items: envelopes, fax paper, colored paper, plastic soda bottles, and wax coated boxes.

Place all other trash into your trash can at your desk. Janitors will empty trash cans twice a week, according to the following schedule:

First Floor	Monday and Wednesday
Second Floor	Tuesday and Friday
Third Floor	Tuesday and Thursday
Fourth Floor	Wednesday and Friday.

Because trash is collected only once a week, please do not leave uneaten food in your trash can.

If you have any questions with these policies, please call 87921. Thank you for your help.

1. Can you recycle newspaper?

A. Yes
B. No
C. The reading does not say.

2. You work on the third floor. It is Friday. You have a sandwich for lunch. You toss it into your trash can. When will it be picked up?

A. Monday
B. Tuesday
C. Wednesday
D. Friday

3. On what date will the new policy begin?

A. January 7
B. January 8
C. January 9
D. The reading does not say

4. Which of the following can be recycled?

A. soda cans
B. fax paper
C. red construction paper
D. computer paper with green lines

5. Can you recycle a glass soda bottle?

A. Yes
B. No
C. The reading does not say

6. What two articles can you dispose of in your own office near your desk?

A. envelopes and used copy paper
B. soda cans and newspapers
C. green line computer print out paper and envelopes
D. fax paper and glass soda bottles

7. Was this the first time Maria Santiago had convulsions?

- A. Yes
- B. No
- C. You can't tell from the form

8. What type of service was this?

- A. Medical equipment
- B. EEG
- C. X-ray
- D. Surgery

PART II. CLEAR WRITING

DIRECTIONS. Read each pair of sentences. Decide which is better and circle it.

1. All correspondents must read the memo.

   The memo must be read by all correspondents.

2. The insured was living in new york. His Physician, however, practiced in pennsylvania and Ohio.

   The insured was living in New York. His physician, however, practiced in Pennsylvania and Ohio.

3. The computer is running very slowly today.

   The computer is running very slow today.

4. I have often went to the technical assistant for help.

   I have often gone to the technical assistant for help.

5. Mrs. Charles gave the work to Jasper and I.

   Mrs. Charles gave the work to Jasper and me.

6. I think the work is very interesting it is difficult sometimes.

   I think the work is very interesting, but it is difficult sometimes.

7. Melissa Jones, the new employee, is going to sit at the empty desk.

Melissa Jones the new employee is going to sit at the empty desk.

8. I can read this manual very easily.

I can read this manual very easy.

9. The patient sprained her ankle. Missed work for 5 days.

The patient sprained her ankle. She missed work for 5 days.

10. He don't enter the data accurately.

He doesn't enter the data accurately.

11. The Patient's name is horace greenly. I could not find his policy number in the Computer.

The patient's name is Horace Greenly. I could not find his policy number in the computer.

12. Her and I went to the class at the same time.

She and I went to the class at the same time.

13. The patient is married to the insured.

The patient married to the insured.

14. We work good together.

We work well together.

15. The office temperature has become an issue among the workers.

The office temperature has became an issue among the workers.

16. Be sure to put the files in there proper place.

Be sure to put the files in their proper place.

17. Most supervisors want a dependable worker.

What most supervisors want is a dependable worker.

18. Bring a pen, and pencil to the meeting

Bring a pen and pencil to the meeting.

19. The letter was written carefully by Carlotta.

Carlotta wrote the letter very carefully.

20. When you are not sure how to proceed with a claim, you can always find information in a manual.

When you are not sure how to proceed with a Claim, you can always find information in a Manual.

21. Us claim analysts use computers every day.

We claim analysts use computers every day.

22. There were many manuals on her desk.

Many manuals were on her desk.

23. Please refer to your EOMB to answer this question.

Please refer to the form called "Explanation of Medical Benefits" to answer this question.

24. The manuals can be used by all employees.

All employees can use the manuals.

25. Use fewer words to make a sentence clear.

Use less words to make a sentence clear.

26. Did you hear Carla say that "she would go to lunch with us?"

Did you hear Carla say that she would go to lunch with us?

27. She is waiting for an answer before she writes the letter.

She is waiting on an answer before she writes the letter.

28. Be sure to enter each procedure with it's proper code number.

Be sure to enter each procedure with its proper code number.

29. Medicare is a federal program. It is available to certain citizens of the United States.

Medicare is a federal program. It is available to certain citizens of the united states.

30. Darren was chosen by the employees to represent them

The employees chose Darren to represent them.

31. The supervisor said, "Complete this work before you go to lunch."

The supervisor said, "Complete this work before you go to lunch".

32. Each of the claims examiners are working extra hours this week.

Each of the claims examiners is working extra hours this week.

33. Don't use that computer. It needs to be fixed.

Don't use that computer. It needs fixed.

34. Does she travel farther to work than you?

Does she travel further to work than you?

35. The procedure code on that form was wrong. The patient had a hysterectomy, but the code was for an appendectomy.

The procedure code on that form was wrong. The Patient had a Hysterectomy, but the code was for an Appendectomy.

36. The insureds, who live in New Jersey, goes to a physician in New York.

The insureds, who live in New Jersey, go to a physician in New York.

PART III. READING FORMS

DIRECTIONS: Read the following forms. Answer the questions at the end. You can look back and read the forms again to answer the questions.

Employee's Name Carlton Avery	**Employee's Social Security Number** 398-11-8901	**Employee's Date of Birth** 5/9/52

Home Address:

Street	**City**	**State**	**Zip Code**
405 Canterfield Drive	Allentown	PA	19232

Marital Status:
__ Single _X_ Married __ Widowed __ Divorced __ Legally Separated

Name of Spouse Marcia Avery	**Spouse's Social Security Number** 133-90-6541	**Is Spouse Employed?** No

Name and Address of Company Where Spouse is Employed

Street	City	State	Zip Code
NA			

Patient's Name Damon Avery	**Patient's Sex** _X_ Male __ Female	**Patient's Date of Birth** 6/21/82	**Relationship** __ Self __ Spouse _X_ Child

If Child—Is (s)he married?	**If Claim is for Dependent 19 or Older is Child Enrolled as a Full-time Student?** __ Yes __ No Name and Address of School: Smith Elementary School 4901 Whitehall Road Allentown, PA

If Accident, Date Occurred
4/11/92

Description of Injury

How did Accident Occur
Patient hit by baseball while playing in yard

IS PATIENT COVERED BY ANOTHER PLAN?

1. Any Group Insurance, Welfare Plan, or other arrangement of coverage for individuals in a group?
___ Yes _X_ No
2. Blue Cross, Blue Shield, or any other prepayment arrangement maintained on a group basis?
___ Yes _X_ No
3. Any other coverage provided by an employer, or by any federal, state, or governmental agency?
___ Yes _X_ No

If yes, please furnish name and address of employer, insurance company or governmental agency, type of coverage, and policy number.

If eligible, is person in Federal Medicare? ___ Yes ___ No	**If "yes," effective date?**

I hereby certify that the above statements are correct, and I authorize any person or organization to furnish full information regarding care or other benefit information.

ASSIGNMENT OF BENEFITS: I authorize payment of benefits to the hospital, physician, or supplier for services described.

_X_ Yes ___ No

Date_______________

Employee Signature ____

PHYSICIAN OR SUPPLIER STATEMENT

1. Patient's Name Damon Avery	**2. Patient's Address** 405 Canterfield Drive, Allentown, PA 19232

3. Date Illness or Injury first occurred 4/11/92	**4. Date first consulted you for this condition** 4/12/92	**5. Has patient ever had same or similar symptoms?**
6. Date Patient Able to Return to Work	**7. Dates of Total Disability** From Through	**8. Dates of Partial Disability** From Through

9. Name of Referring Physician P.W. Sabol, MD	**10. For services requiring hospitalization, give hospitalization dates.** Admitted 4/11/92 Discharged 4/21/92
11. Name & address of facility where services rendered General Hospital 532 Market Street Allentown, PA 19232	**12. Was laboratory work performed outside your office?** No

13. Diagnosis or nature of illness or injury

1. 852.43 Epidural hematoma with moderate loss of consciousness
2. 803.23 Skull fracture with epidural hemorrhage with moderate loss of consciousness
3.
4.
5.

14.A Date of Service ice	B. Place of Service	C. Procedure Code	Fully describe procedures, medical services or supplies furnished for each date given (explain unusual services or circumstances)	D. Diagnosis Code	E. Charges
4/12/92	1	61312	Craniectomy or craniotomy, for evacuation of epidural hematoma	1/2	4,000.00

15. Signature of Physician or Supplier	**16. Total Charge** 4,000.	**17. Amount Paid** 0.00	**18. Balance Due** 4,000.

Signature Date		**19. Physician's or Supplier's name, address, and phone number**
20. Your patient's account number 6123	21. Physician's Tax ID Number 645 89 5442	Tracy M. Klinginger, MD 225 N. Barlow Street Allentown, PA 17235 (215) 555-3271

1. Is Damon Avery covered by any other insurance?

   A. Yes
   B. No
   C. You can't tell from the form

2. Was the patient hospitalized?

   A. Yes
   B. No
   C. You can't tell from the form

3. Who will get the check for this claim?

   A. Damon Avery
   B. Carlton Avery
   C. Dr. Kinginger
   D. General Hospital

4. What is the name of the referring physician?

   A. Dr. Sabol
   B. Dr. Klinginger
   C. Dr. Avery
   D. There was no referring physician

5. What part of the patient's body was hurt?

   A. His leg
   B. His arm
   C. His stomach
   D. His head

6. What is the relationship of the patient to the insured?

   A. His son
   B. His wife
   C. You cannot tell from the form
   D. His employer

7. What is the service that this claim is for?

   A. Surgery
   B. Lab tests
   C. x-rays
   D. Office visit

8. How did the accident occur?

   A. Damon was hit in the head with a baseball bat.
   B. Damon was hit in the head with a baseball.
   C. Damon fell down while playing baseball
   D. Damon's friend hit him with a bat

8. How soon after the accident did Damon receive this service?

   A. The same day
   B. The next day
   C. Three days later
   D. A week later

Employee's Name Joseph Cimbala	Employee's Social Security Number 209-31-4895	Employee's Date of Birth 10/11/56

Home Address: No	Street	City	State	Zip
73 Academy Street		Hemingway ,	PA	19087

Marital Status: __X__Single ____Married _____Widowed _____Divorced
_____Legally Separated

Name Of Spouse NA	Spouse's Social Security Number	Is Spouse Employed?

Name and Address of Company Where Spouse is Employed	Street	City	State	Zip
NA				

Patient's Name	Patient's Sex __X__Male _____Female	Patient's Birthdate	Relationship __X__ ____Spouse ____Child

If child – Is (s)he married?	If Claim is for Dependent Child 19 or Older is Child Enrolled as a Full-time Student? _____ Yes ______No	Name & Address of School Atten and Dates Attended

If accident, Date Occurred	Description of Injury	How Accident Occurred

IS PATIENT COVERED BY ANOTHER PLAN?

1. Any Group Insurance, Welfare Plan, or other arrangement of coverage for individuals in a group? _____Yes __X__No
2. Blue Cross, Blue Shield, or any other prepayment arrangement maintained on a group basis? _____Yes __X__No
3. Any other coverage provided by an employer, or by any federal, state, or governmental agency? _____Yes __X__No

If yes please furnish name and address of employer, insurance company or governmental agency, type of coverag policy number.

If eligible, is person enrolled in Federal Medicare? _____Yes _____No	If "yes," effective date

I hereby certify that the above statements are correct, and I authorize any person or organization to furnish full information regarding care or other benefit information.

ASSIGNMENT OF BENEFITS: I authorize payment of benefits to the hospital, physician, or supplier for services described.

__X__ Yes ______No

Date____________________________

Employee Signature____

PHYSICIAN OR SUPPLIER STATEMENT

1. Patient's Name
Joseph Cimbala

2. Patient's address
73 Academy Street
Hemingway, PA 19087

3. Date illness or injury first appeared
4/22/91

4. Date first consulted you for this condition
7/18/91

5. Has patient ever had same or similar symptoms?

6. Date Patient Able to Return to Work
2/1/93

7. Dates of Total Disability
From 12/1/92
Through 2/1/93

8. Dates of partial disability
From Through

9. Name of Referring Physician
C.W. Cusson, MD

10. For services requiring hospitalization give hospitalization dat
Admitted 12/1/92 Discharged 12/11/92

11. Name & address of facility where services rendered
General Hospital
532 Market Street
Hemingway, PA

12. Was laboratory work performed outside your office?

13. Diagnosis or nature of illness or injury

1. displacement, lumbar inter vertebral disc 722.10
2.
3.
4.

14. A Date of Service	B Place of Service	C Procedure Code	Fully describe procedures, medical services or supplies furnished for each date given (explain unusual services or circumstances)	D Diagnosis Code	E. Charges
12/2/92	1	63042	hemilaminectomy, lumbar	1	1000.0

15. Signature of Physician or Supplier

Signed Date

16. Total Charge
1000.00

17. Amt. Paid
0.00

18. Balance
1000.00

19. Physician's or Supplier's name, address, zip code & telephone number.
Dorothy L. Spinoza

20. Your Patient's Account Number 6123	21. Physician's Tax ID Number 645 89 5442	225 N. Franklin Street Hemingway, PA (215) 555-3271

1. How long was the patient disabled?

   A. He was not disabled
   B. Two months
   C. Three weeks
   D. Three months

2. Is the patient covered by any other insurance plan?

   A. Yes
   B. No
   C. You can't tell from the form

3. What is the diagnosis code?

   A. 63042
   B. 722.10
   C. 6123
   D. 645 89 5442

4. What is Dr. Cusson's specialty?

   A. General practitioner
   B. General surgeon
   C. Orthopedic surgeon
   D. You can't tell from the form

5. Is the patient married?

   A. Yes
   B. No
   C. You can't tell from the form

6. Where was Joseph Cimbala's problem?

   A. His back
   B. His head
   C. His leg
   D. You can't tell from the form

7. How much did the service cost?

   A. $1000.
   B. $2000.
   C. $0
   D. You can't tell from the form

8. When did Joseph first have symptoms?

   A. 12/2/92
   B. 4/22/91
   C. 12/1/92
   D. 2/1/93

PATIENT & INSURED INFORMATION		
1. PATIENT'S NAME Maria Santiago	2. PATIENT'S DATE OF BIRTH 6/17/30	3. INSURED'S NAME Carlos Santiago
4. PATIENT'S ADDRESS 772 Kensington Avenue Phildelphia, PA 19055	5. PATIENT'S SEX Female	6. INSURED'S ID1 132-20-7331
	7. RELATIONSHIP TO INSURED Spouse	8. INSURED'S GROUP NUMBER AB7619
9. OTHER HEALTH INSURANCE COVERAGE. Enter Name of Policyholder and Plan Name and Address and Policy or Medical Assistance Number None	10. WAS CONDITION RELATED TO A. PATIENT'S EMPLOYMENT NO B. AN ACCIDENT AUTO OTHER	11. INSURED'S ADDRESS

PHYSICIAN OR SUPPLIER INFORMATION

14. DATE OF ILLNESS OR INJURY OR PREGNANCY	15. DATE FIRST CONSULTED YOU FOR THIS CONDITION 1/7/92	16 HAS PATIENT EVER HAD THESE SYMPTOMS BEFORE NO	16a. C here emerg

17. DATE PATIENT ABLE TO RETURN TO WORK	18. DATES OF TOTAL DISABILITY	DATES OF PARTIAL DISAB
19. NAME OF REFERRING PHYSICIAN	19a. ID NUMBER	20. FOR SERVICES RELA TO HOSPITALIZATION GIV HOSPITALIZATION DATES ADMITTED DISCHARGED
21. NAME & ADDRESS OF FACILITY WHERE SERVICES RENDERED General Hospital Broad Street Philadelphia, PA	21a. ID NUMBER	22. WAS LABORATORY W PERFORMED OUTSIDE YC OFFICE? No

23a. DIAGNOSIS OR NATURE OF ILLNESS OR INJURY, RELATE DIAGNOSIS TO PROCEDURE IN COLUMN E BY REFERENCE NUMBERS 1,2,3, ETC. OR DX CODE. 1. 780.3 Convulsions 2. 3. 4.	23b. WAS THIS SERVICE PERFORME A RESULT OF AN EPSDT PROGRAM REFERRAL?

24,A DATE OF SERVICE	B. PLACE OF SERVICE	C. T.O.S.	D. FULLY DESCRIBE PROCEDURES, MEDICAL SERVICES OR SUPPLIES FURNISH FOR EACH DATE GIVEN (EXPLAIN UNUSUAL CIRCUMSTANCES	E. DIAGNOSIS CODE	F. DAYS OR UNITS	G. CHARGES	H. CI IF FA LY PL NI
1/20/92	o		95819 EEG including recording awake, drowsy & sleeping	1		110.00	

29. SIGNATURE OF PHYSICIAN OR SUPPLIER Sean Mcdowell	26. ACCEPT ASSIGNMENT YES	27. TOTAL CHARGE 110.00	28. AMOUNT PAID 0.00	29. BALANC DUE 110.00

_X_MD __DO __OD __DPM __DC __PhD DATE 2/7/92	30. PROVIDER SOCIAL SECURITY/I.D. NUMBER EM729460	31. PHYSICIAN OR SUPPLIER'S NAME, ADDRESS & ZIP CODE Neurological Associates General Hospital Broad Street Philadelphia, PA 19721
32. PATIENT'S ACCOUNT NO.	33. EMPLOYER I.D. NO.	

1. What is the name of the insured?

   A. Maria Santiago
   B. Carlos Santiago
   C. Sean McDowell

2. What is the relationship of the patient to the insured?

   A. Wife
   B. Daughter
   C. Employee
   D. Employer

3. What is the procedure code?

   A. 780.3
   B. 95819
   C. 729460
   D. 132-20-7331

4. What is the patient's social security number?

   A. 132-20-7331
   B. 729-94-600
   C. AB7619
   D. You can't tell from the form

5. What type of doctor is Sean McDowell?

   A. An osteopathic doctor
   B. A psychologist
   C. A medical doctor
   D. An optometrist

6. Where was the service performed?

   A. In a hospital
   B. In a physician's office
   C. In the patient's home
   D. You can't tell from the form

PART IV. VOCABULARY

I. DIRECTIONS: Read each of the following sentences. Circle the word or phrase that completes each sentence correctly.

1. If something is in **alphanumeric code**, it contains:

    a. whole words and numbers
    b. only letters
    c. only numbers
    d. letters and numbers

2. When insureds make **inquiries**, they

    a. ask questions
    b. make payments
    c. voice complaints
    d. cancel their coverage

3. To **terminate** means to

    a. begin
    b. end
    c. continue
    d. refuse

4. When you **verify** a statement you

    a. make sure it is correct or true
    b. make sure it does not exist
    c. keep it secret
    d. tell your supervisor

6. A **beneficiary** is

    a. someone who does good for others
    b. a medical equipment supplier
    c. a person who receives services covered by insurance
    d. the person who employs the insured

7. Which of the following is an example of a **credential**?

    a. an insurance policy
    b. a license to practice medicine
    c. a bill from a physician
    d. a receipt of payment

8. To **authorize** is to

   a. give permission
   b. to write
   c. to sign a name
   d. to reject

9. To **render** services means to

   a. charge for services
   b. ask for service
   c. refuse to give services
   d. give services

10. The **source** is the place where

   a. something continues
   b. something ends
   c. something begins
   d. something exists

II. DIRECTIONS: Complete the paragraph by writing the correct word in each blank. You will find all words in the word box. You will not use all words.

WORD BOX

release
consultation
chronic
surgical
referring
modifier
prior
initial
admitted
status

The patient was ________________ to the hospital on January 23. The patient signed a ____________ ______________ to entering the hospital. She was experiencing severe back pain. The ________________ physician was Donna Derzinsky, M.D. Dr. Derzinsky sent the patient to Dr. Ruben for ____________ . The patient has a ______________ back problem. The ______________ examination when she first entered the hospital showed no nerve involvement. At this time, no __________________ intervention is indicated. The patient received physical therapy and bed rest. Her current ________________ is fair. Prognosis is good.

III. DIRECTIONS: Match the words on the left to their meanings on the right. Write the correct letter in each blank. You will not use all meanings.

_____ denied

_____ certify

_____ primary

_____ field

_____ current

_____ routine

_____ malfunction

_____ partial

_____ modifier

_____ terminate

_____ procedure

A. ordinary, regular

B. end

C. the blank area on a form to be completed

D. the way to do something

E. right now

F. not all

G. something that changes something

H. refused, told no

I. not working properly

J. entirely

K. first

L. to say something is true

Name____

Date____

Class Meeting Time__________________________________

Job Title____

GENERAL DIRECTIONS. You will receive this test before you start your classes. You will take the test again after you complete your classes. The test is based on what you have studied in your classes. This test has several parts. Be sure to complete all parts. Take the time you need to complete the test.

APPENDIX OF

TABLES

APPENDIX B

BLUESHIELD CUMULATIVE CRT
RESULTS (BY TABE LEVEL) N=130

Paired t-test
Split By: TABE LEVEL
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
Total, Total: Total	3.838	129	5.483	<.0001
Total, Total: A	2.272	91	3.981	.0001
Total, Total: D	4.053	18	3.335	.0037
Total, Total: E	16.429	6	1.997	.0929
Total, Total: M	8.167	11	3.884	.0025

Paired t-test
Split By: TABE LEVEL
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
Read, Read: Total	.746	129	3.238	.0015
Read, Read: A	.587	91	2.769	.0068
Read, Read: D	.526	18	.754	.4607
Read, Read: E	3.143	6	1.335	.2304
Read, Read: M	.917	11	1.251	.2370

Paired t-test
Split By: TABE LEVEL
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
Grammar, Grammar: Total	1.608	129	5.611	<.0001
Grammar, Grammar: A	1.293	91	4.502	<.0001
Grammar, Grammar: D	2.263	18	2.468	.0239
Grammar, Grammar: E	2.571	6	1.026	.3444
Grammar, Grammar: M	2.417	11	2.737	.0193

Paired t-test
Split By: TABE LEVEL
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
Forms, Forms: Total	.585	129	2.385	.0185
Forms, Forms: A	.130	91	.470	.6394
Forms, Forms: D	.632	18	1.752	.0967
Forms, Forms: E	3.429	6	1.841	.1153
Forms, Forms: M	2.333	11	3.442	.0055

Paired t-test
Split By: TABE LEVEL
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
Vocab, Vocab: Total	.900	129	2.684	.0082
Vocab, Vocab: A	.261	91	.865	.3894
Vocab, Vocab: D	.632	18	1.372	.1868
Vocab, Vocab: E	7.286	6	2.380	.0547
Vocab, Vocab: M	2.500	11	1.650	.1272

Descriptive Statistics for Pretests
Split By: TABE LEVEL

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Read, Total	20.546	2.856	.250	130	9.000	24.000	0
Read, A	21.435	1.818	.189	92	17.000	24.000	0
Read, D	20.105	2.355	.540	19	16.000	24.000	0
Read, E	15.714	4.957	1.874	7	9.000	24.000	0
Read, M	17.250	3.494	1.008	12	10.000	22.000	0
Grammar, Total	26.600	3.802	.334	130	14.000	34.000	0
Grammar, A	27.924	2.917	.304	92	21.000	34.000	0
Grammar, D	24.211	3.392	.778	19	16.000	30.000	0
Grammar, E	21.714	5.851	2.212	7	14.000	30.000	0
Grammar, M	23.083	2.906	.839	12	19.000	29.000	0
Forms, Total	21.469	2.709	.238	130	13.000	25.000	0
Forms, A	22.217	1.999	.208	92	15.000	25.000	0
Forms, D	21.105	2.355	.540	19	17.000	24.000	0
Forms, E	16.857	4.018	1.519	7	13.000	22.000	0
Forms, M	19.000	3.162	.913	12	13.000	24.000	0
Vocab, Total	25.169	5.654	.496	130	5.000	30.000	0
Vocab, A	27.141	3.000	.313	92	16.000	30.000	0
Vocab, D	25.000	4.082	.937	19	14.000	30.000	0
Vocab, E	12.429	8.715	3.294	7	5.000	30.000	0
Vocab, M	17.750	5.987	1.728	12	8.000	27.000	0
Total, Total	93.785	12.571	1.103	130	43.000	111.000	0
Total, A	98.717	6.883	.718	92	78.000	111.000	0
Total, D	90.421	7.552	1.733	19	73.000	102.000	0
Total, E	66.714	19.864	7.508	7	43.000	105.000	0
Total, M	77.083	12.616	3.642	12	57.000	99.000	0

Descriptive Statistics for Posttests
Split By: TABE LEVEL

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Read, Total	21.292	2.371	.208	130	14.000	24.000	0
Read, A	22.022	1.729	.180	92	16.000	24.000	0
Read, D	20.632	2.852	.654	19	15.000	24.000	0
Read, E	18.857	2.478	.937	7	14.000	22.000	0
Read, M	18.167	2.209	.638	12	15.000	22.000	0
Grammar, Total	28.208	3.576	.314	130	20.000	35.000	0
Grammar, A	29.217	3.274	.341	92	22.000	35.000	0
Grammar, D	26.474	3.186	.731	19	21.000	31.000	0
Grammar, E	24.286	3.352	1.267	7	20.000	29.000	0
Grammar, M	25.500	2.646	.764	12	23.000	31.000	0
Forms, Total	22.054	2.843	.249	130	0	25.000	0
Forms, A	22.348	2.899	.302	92	0	25.000	0
Forms, D	21.737	1.821	.418	19	18.000	24.000	0
Forms, E	20.286	3.904	1.475	7	12.000	24.000	0
Forms, M	21.333	2.839	.820	12	14.000	24.000	0
Vocab, Total	26.069	3.973	.348	130	4.000	29.000	0
Vocab, A	27.402	1.498	.156	92	20.000	29.000	0
Vocab, D	25.632	3.789	.869	19	13.000	29.000	0
Vocab, E	19.714	7.365	2.784	7	4.000	26.000	0
Vocab, M	20.250	5.972	1.724	12	8.000	28.000	0
Total, Total	97.623	9.984	.876	130	50.000	112.000	0
Total, A	100.989	6.803	.709	92	61.000	112.000	0
Total, D	94.474	8.771	2.012	19	67.000	107.000	0
Total, E	83.143	15.082	5.701	7	50.000	95.000	0
Total, M	85.250	11.128	3.212	12	60.000	104.000	0

APPENDIX C

BLUESHIELD CUMULATIVE CYCLES
TABE POSTTEST DATA N=244

Descriptive Statistics

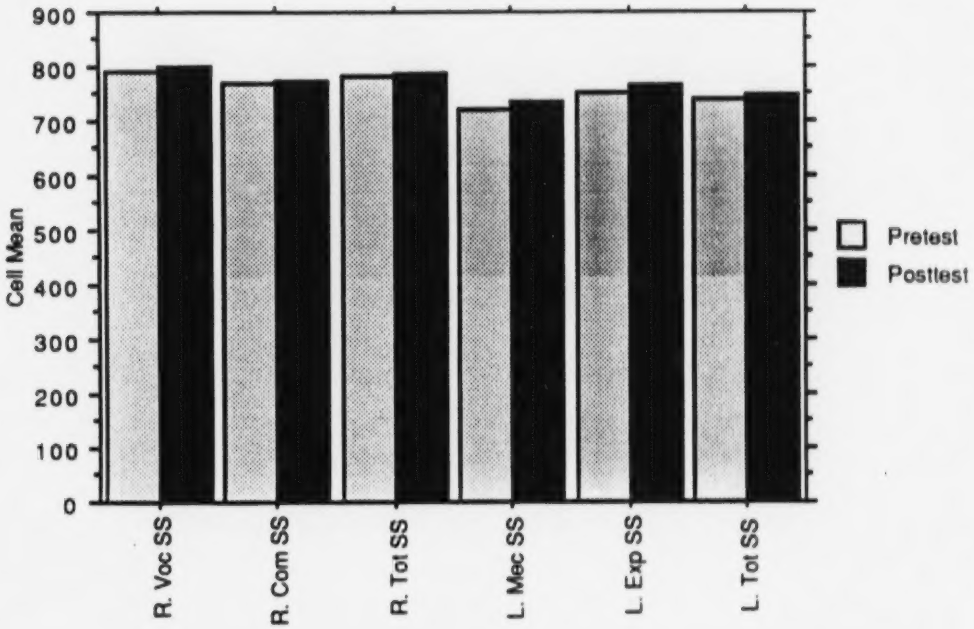
	Mean	Std. Dev.	Std. Error	Minimum	Maximum
R. Voc SS	798.689	55.771	3.570	592.000	961.000
R. Com SS	773.520	32.708	2.094	500.000	823.000
R. Tot SS	785.955	41.773	2.674	551.000	844.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
L. Mec SS	734.988	42.085	2.694	535.000	838.000
L. Exp SS	763.971	54.171	3.468	592.000	885.000
L. Tot SS	749.693	45.352	2.903	571.000	853.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
R. Voc GE	11.289	2.910	.186	2.400	12.900
R.Com GE	11.295	2.606	.167	1.800	12.900
R. Tot GE	11.344	2.730	.175	2.100	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
L. Mec GE	10.015	3.420	.219	.400	12.900
L. Exp GE	10.388	3.272	.209	1.900	12.900
L. Tot GE	10.329	3.258	.209	1.500	12.900

BLUESHIELD CUMULATIVE CYCLES
TABE SUBTEST RESULTS
SCALE SCORES N=244



Paired t-tests: Pretests vs. Posttests
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
R. Voc SS, R. Voc SS	5.861	243	1.841	.0668

	Mean Diff.	DF	t-Value	P-Value
R. Com SS, R. Com SS	4.463	243	2.208	.0282

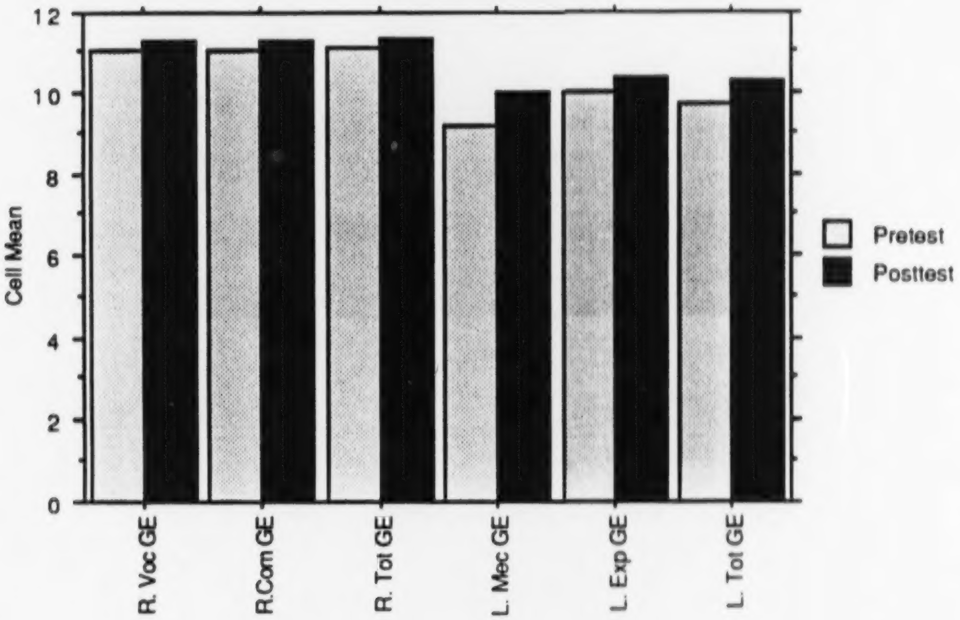
	Mean Diff.	DF	t-Value	P-Value
R. Tot SS, R. Tot SS	4.578	243	1.918	.0563

	Mean Diff.	DF	t-Value	P-Value
L. Mec SS, L. Mec SS	12.324	243	4.486	<.0001

	Mean Diff.	DF	t-Value	P-Value
L. Exp SS, L. Exp SS	12.344	243	3.895	.0001

	Mean Diff.	DF	t-Value	P-Value
L. Tot SS, L. Tot SS	12.295	243	4.526	<.0001

BLUESHIELD CUMULATIVE CYCLES
TABE SUBTEST RESULTS
GRADE EQUIVELANT SCORES N=244



Paired t-tests: Pretests vs. Posttests
Hypothesized Difference = 0

	Mean Diff.	DF	t-Value	P-Value
R. Voc GE, R. Voc GE	.196	243	1.143	.2543

	Mean Diff.	DF	t-Value	P-Value
R.Com GE, R.Com GE	.230	243	1.446	.1495

	Mean Diff.	DF	t-Value	P-Value
R. Tot GE, R. Tot GE	.189	243	1.164	.2457

	Mean Diff.	DF	t-Value	P-Value
L. Mec GE, L. Mec GE	.821	243	3.405	.0008

	Mean Diff.	DF	t-Value	P-Value
L. Exp GE, L. Exp GE	.382	243	1.943	.0531

	Mean Diff.	DF	t-Value	P-Value
L. Tot GE, L. Tot GE	.613	243	2.945	.0035

PA BLUESHIELD TABE PRETEST
DESCRIPTIVE DATA BY CYCLE

CYCLE I N=27

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	803.111	39.124	7.529	718.000	865.000
Some of R. Com SS	774.444	19.338	3.722	733.000	823.000
Some of R. Tot SS	789.000	27.741	5.339	726.000	844.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	726.296	37.256	7.170	658.000	793.000
Some of L. Exp SS	744.667	44.733	8.609	617.000	805.000
Some of L. Tot SS	735.741	36.455	7.016	651.000	792.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	11.641	2.074	.399	5.800	12.900
Some of R.Com GE	11.500	2.237	.430	6.400	12.900
Some of R. Tot GE	11.604	2.135	.411	6.100	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	9.230	3.740	.720	3.300	12.900
Some of L. Exp GE	9.567	3.200	.616	2.300	12.900
Some of L. Tot GE	9.381	3.578	.689	2.000	12.900

PA BLUESHIELD TABE PRETEST
DESCRIPTIVE DATA BY CYCLE

CYCLE II N=69

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	783.116	68.252	8.217	571.000	865.000
Some of R. Com SS	765.290	44.817	5.395	589.000	823.000
Some of R. Tot SS	774.464	55.332	6.661	580.000	836.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	720.174	47.617	5.732	535.000	812.000
Some of L. Exp SS	747.797	57.901	6.970	568.000	841.000
Some of L. Tot SS	734.188	49.773	5.992	552.000	827.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	10.639	3.438	.414	2.200	12.900
Some of R.Com GE	10.762	3.035	.365	2.300	12.900
Some of R. Tot GE	10.770	3.265	.393	2.300	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	8.828	3.708	.446	.400	12.900
Some of L. Exp GE	9.952	3.561	.429	1.900	12.900
Some of L. Tot GE	9.616	3.631	.437	1.200	12.900

PA BLUESHIELD TABE PRETEST
DESCRIPTIVE DATA BY CYCLE

CYCLE III N=55

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	791.727	59.454	8.017	623.000	865.000
Some of R. Com SS	767.527	35.778	4.824	624.000	806.000
Some of R. Tot SS	779.873	46.408	6.258	631.000	836.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	715.545	47.217	6.367	565.000	793.000
Some of L. Exp SS	747.509	57.129	7.703	544.000	841.000
Some of L. Tot SS	731.836	49.544	6.681	555.000	802.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	11.160	3.268	.441	2.800	12.900
Some of R.Com GE	11.173	2.951	.398	2.600	12.900
Some of R. Tot GE	11.185	3.109	.419	2.800	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	8.807	4.045	.545	1.100	12.900
Some of L. Exp GE	10.018	3.666	.494	1.700	12.900
Some of L. Tot GE	9.504	3.733	.503	1.300	12.900

PA BLUESHIELD TABE PRETEST
DESCRIPTIVE DATA BY CYCLE

CYCLE IV N=35

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	798.714	56.939	9.624	592.000	865.000
Some of R. Com SS	773.771	36.231	6.124	617.000	823.000
Some of R. Tot SS	786.514	45.301	7.657	605.000	834.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	728.029	49.849	8.426	569.000	793.000
Some of L. Exp SS	759.343	60.956	10.303	557.000	885.000
Some of L. Tot SS	743.914	53.121	8.979	563.000	833.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	11.289	2.931	.495	2.400	12.900
Some of R.Com GE	11.217	2.815	.476	2.500	12.900
Some of R. Tot GE	11.317	2.887	.488	2.400	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	9.874	3.770	.637	1.200	12.900
Some of L. Exp GE	10.640	3.533	.597	1.800	12.900
Some of L. Tot GE	10.366	3.580	.605	1.400	12.900

PA BLUESHIELD TABE PRETEST
DESCRIPTIVE DATA BY CYCLE

CYCLE V N=56

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	796.821	54.796	7.322	616.000	865.000
Some of R. Com SS	768.661	39.833	5.323	544.000	823.000
Some of R. Tot SS	783.786	44.178	5.903	580.000	844.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	725.839	41.994	5.612	608.000	812.000
Some of L. Exp SS	756.304	52.422	7.005	638.000	885.000
Some of L. Tot SS	741.339	45.050	6.020	623.000	849.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	11.168	3.013	.403	2.600	12.980
Some of R.Com GE	10.963	2.638	.353	2.000	12.900
Some of R. Tot GE	11.218	2.804	.375	2.300	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	9.452	3.679	.492	2.100	12.900
Some of L. Exp GE	9.771	3.596	.481	2.000	12.900
Some of L. Tot GE	9.689	3.517	.470	2.300	12.900

PA BLUESHIELD TABE POSTTEST
DESCRIPTIVE DATA BY CYCLE

CYCLE I N=27

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	803.667	37.009	7.122	731.000	865.000
Some of R. Com SS	777.815	14.489	2.788	742.000	802.000
Some of R. Tot SS	790.926	24.072	4.633	741.000	834.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	735.926	32.074	6.173	676.000	793.000
Some of L. Exp SS	757.667	42.906	8.257	683.000	863.000
Some of L. Tot SS	747.074	34.273	6.596	690.000	814.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	11.796	1.882	.362	6.600	12.900
Some of R.Com GE	11.926	1.759	.339	7.300	12.900
Some of R. Tot GE	11.922	1.756	.338	7.200	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	10.133	2.979	.573	4.300	12.900
Some of L. Exp GE	10.141	2.787	.536	4.000	12.900
Some of L. Tot GE	10.344	2.865	.551	4.800	12.900

PA BLUESHIELD TABE POSTTEST
DESCRIPTIVE DATA BY CYCLE

CYCLE II N=69

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	795.130	64.450	7.759	601.000	961.000
Some of R. Com SS	765.957	45.447	5.471	500.000	806.000
Some of R. Tot SS	779.377	51.191	6.163	551.000	836.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	730.565	43.801	5.273	535.000	838.000
Some of L. Exp SS	754.377	51.261	6.171	592.000	841.000
Some of L. Tot SS	742.725	44.662	5.377	571.000	831.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	11.038	3.172	.382	2.400	12.900
Some of R.Com GE	10.712	3.129	.377	1.800	12.900
Some of R. Tot GE	10.965	3.015	.363	2.100	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	9.758	3.462	.417	.400	12.900
Some of L. Exp GE	10.045	3.509	.422	1.900	12.900
Some of L. Tot GE	10.101	3.315	.399	1.500	12.900

PA BLUESHIELD TABE POSTTEST
DESCRIPTIVE DATA BY CYCLE

CYCLE III N=55

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	798.618	58.863	7.937	637.000	865.000
Some of R. Com SS	774.909	28.494	3.842	680.000	823.000
Some of R. Tot SS	787.000	42.395	5.717	661.000	844.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	734.982	42.604	5.745	624.000	838.000
Some of L. Exp SS	766.073	49.803	6.715	649.000	868.000
Some of L. Tot SS	750.727	43.027	5.802	650.000	853.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	11.187	3.144	.424	3.000	12.900
Some of R.Com GE	11.427	2.612	.352	4.100	12.900
Some of R. Tot GE	11.318	2.932	.395	3.300	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	9.971	3.591	.484	2.400	12.900
Some of L. Exp GE	10.753	3.176	.428	2.800	12.900
Some of L. Tot GE	10.464	3.357	.453	2.900	12.900

PA BLUESHIELD TABE POSTTEST
DESCRIPTIVE DATA BY CYCLE

CYCLE IV N=35

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	800.514	55.719	9.418	616.000	865.000
Some of R. Com SS	780.000	23.382	3.952	704.000	823.000
Some of R. Tot SS	790.514	37.244	6.295	680.000	834.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	740.543	41.955	7.092	616.000	838.000
Some of L. Exp SS	776.857	61.535	10.401	592.000	885.000
Some of L. Tot SS	758.943	49.235	8.322	604.000	840.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	11.443	3.032	.512	2.600	12.900
Some of R.Com GE	11.659	2.052	.347	5.100	12.900
Some of R. Tot GE	11.543	2.623	.443	4.000	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	10.571	3.399	.575	2.200	12.900
Some of L. Exp GE	10.906	3.174	.536	2.100	12.900
Some of L. Tot GE	10.754	3.069	.519	2.000	12.900

PA BLUESHIELD TABE POSTTEST
DESCRIPTIVE DATA BY CYCLE

CYCLE V N=56

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc SS	800.464	50.762	6.783	592.000	865.000
Some of R. Com SS	775.500	28.615	3.824	655.000	823.000
Some of R. Tot SS	788.286	38.395	5.131	624.000	836.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec SS	737.214	43.967	5.875	642.000	838.000
Some of L. Exp SS	769.357	61.036	8.156	628.000	885.000
Some of L. Tot SS	753.411	50.262	6.717	638.000	853.000

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of R. Voc GE	11.384	2.746	.367	2.400	12.900
Some of R.Com GE	11.370	2.498	.334	3.200	12.900
Some of R. Tot GE	11.452	2.642	.353	2.700	12.900

	Mean	Std. Dev.	Std. Error	Minimum	Maximum
Some of L. Mec GE	10.037	3.411	.456	2.900	12.900
Some of L. Exp GE	10.286	3.359	.449	2.400	12.900
Some of L. Tot GE	10.262	3.408	.455	2.600	12.900